

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL COMMISSION

REGULATION NO. 35

CLASSIFICATIONS AND NUMERIC STANDARDS
FOR
GUNNISON AND LOWER DOLORES RIVER BASINS

ADOPTED:	January 10, 1983
EFFECTIVE:	March 2, 1983
AMENDED:	December 12, 1983
EFFECTIVE:	January 30, 1984
TRIENNIAL REVIEW:	April 7, 1986
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EFFECTIVE:	April 30, 1988
AMENDED:	August 1, 1988
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AMENDED:	December 4, 1990
EFFECTIVE:	January 30, 1991
AMENDED:	December 7, 1992
EFFECTIVE:	January 30, 1993
AMENDED:	March 1, 1993
EFFECTIVE:	April 30, 1993
AMENDED:	February 13, 1995
EFFECTIVE:	March 30, 1995
AMENDED:	July 10, 1995
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AMENDED:	December 11, 1995
EFFECTIVE:	January 30, 1996
AMENDED:	July 14, 1997
EFFECTIVE:	August 30, 1997
AMENDED:	July 14, 1997
EFFECTIVE:	August 30, 1997
AMENDED:	April 13, 1998
EFFECTIVE:	May 30, 1998
AMENDED:	December 14, 1998
EFFECTIVE:	January 30, 1999

STATE OF COLORADO

Roy Romer, Governor
Patti Shwayder, Executive Director

WATER QUALITY CONTROL COMMISSION

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Colorado Department
of Public Health
and Environment

NOTICE OF FINAL ADOPTION

PURSUANT to the provisions of sections 24-4-103(5) and 24-4-103(11), C.R.S.

NOTICE IS HEREBY GIVEN that the Colorado Water Quality Control Commission, after a public rulemaking process complying with the provisions of 24-4-103 and 25-8-401(1), C.R.S., amended on December 14, 1998, pursuant to 25-8-202(1)(b); 25-8-204; and 25-8-402, C.R.S., and Section 21.3 of the "Procedural Rules" the regulation entitled:

"Classifications and Numeric Standards for Gunnison and Lower Dolores River Basin",
Regulation #35 (5 CCR 1002-35)

Providing for extension of temporary modifications and water quality standards effective dates.

Also, pursuant to 24-4-103(8)(b), C.R.S., this amendment was submitted to the Attorney General for review and was found to be within the authority of the Water Quality Control Commission, and further that there are no apparent constitutional deficiencies.

This action will be submitted to the Office of Legislative Legal Services within twenty (20) days after the date of the Attorney General's Opinion, pursuant to 24-4-103(8)(d), C.R.S., and to the Secretary of State in time for December, 1998 publication in the Colorado Register pursuant to 24-4-103(5) and (11)(d), C.R.S., and will become effective January 30, 1999.

A copy of the amendment is attached and made a part of this notice.*

Dated this 16th day of December, 1998, at Denver, Colorado.

WATER QUALITY CONTROL COMMISSION

Diana Glaser, Program Assistant

*A copy of this regulation
is available at a charge of \$5.00
pursuant to 24-4-103(9), C.R.S.

35.1 AUTHORITY

These regulations are promulgated pursuant to section 25-8-101 et seq. C.R.S., as amended, and in particular, 25-8-203 and 25-8-204.

35.2 PURPOSE

These regulations establish classifications and numeric standards for the Gunnison River/Lower Dolores River Basins, including all tributaries and standing bodies of water. This includes all or parts of Gunnison, Delta, Montrose, Ouray, Mesa, Saguache and Hinsdale Counties. This also includes the lower Dolores River and its tributaries in Dolores, Montrose, Mesa and San Miguel Counties. The classifications identify the actual beneficial uses of the water. The numeric standards are assigned to determine the allowable concentrations of various parameters. Discharge permits will be issued by the Water Quality Control Division to comply with basic, narrative, and numeric standards and control regulations so that all discharges to waters of the state protect the classified uses. (See Regulation No. 31, section 31.14). It is intended that these and all other stream classifications and numeric standards be used in conjunction with and be an integral part of Regulation No.31 Basic Standards and Methodologies for Surface Water.

35.3 INTRODUCTION

These regulations and tables present the classifications and numeric standards assigned to stream segments listed in the attached tables (See section 35.7). As additional stream segments are classified and numeric standards for designated parameters are assigned for this drainage system, they will be added to or replace the numeric standards in the tables in section 35.7. Any additions or revisions of classifications or numeric standards can be accomplished only after public hearing by the Commission and proper consideration of evidence and testimony as specified by the statute and the "basic regulations".

35.4 DEFINITIONS

See the Colorado Water Quality Control Act and the codified water quality regulations for definitions.

35.5 BASIC STANDARDS

- (1) All waters of the Gunnison River/Lower Dolores River Basins are subject to the following standard for temperature. (Discharges regulated by permits, which are within the permit limitations, shall not be subject to enforcement proceedings under this standard). Temperature shall maintain a normal pattern of diurnal and seasonal fluctuations with no abrupt changes and shall have no increase in temperature of a magnitude, rate, and duration deemed deleterious to the resident aquatic life. Generally, a maximum 3°C increase over a minimum of a four-hour period, lasting 13 hours maximum, is deemed acceptable for discharges fluctuating in volume or temperature. Where temperature increases cannot be maintained within this range using Best Management Practices (BMP), Best Available Technology Economically Achievable (BATEA), and Best Practical Waste Treatment Technology (BPWTT) control measures, the Commission may determine by a rulemaking hearing in accordance with the requirements of the applicable statutes and the basic regulations, whether or not a change in classification

is warranted.

- (2) See Basic Standards and Methodologies for Surface Water, Regulation No. 31, section 31.11 for a listing of organic standards. The column in the tables headed "Water Fish" are presumptively applied to all aquatic life class 1 streams and are applied to aquatic life class 2 streams on a case-by-case basis as shown in the tables in 35.6.

(3) URANIUM

- (a) All waters of the Gunnison/Lower Dolores River Basin, are subject to the following basic standard for uranium, unless otherwise specified by a water quality standard applicable to a particular segment. However, discharges of uranium regulated by permits which are within these permit limitations shall not be a basis for enforcement proceedings under this basic standard.
- (b) Uranium level in surface waters shall be maintained at the lowest practicable level.
- (c) In no case shall uranium levels in waters assigned a water supply classification be increased by any cause attributable to municipal, industrial, or agricultural discharges so as to exceed 40 pCi/l or naturally-occurring concentrations (as determined by the State of Colorado), whichever is greater.
- (d) In no case shall uranium levels in waters assigned a water supply classification be increased by a cause attributable to municipal, industrial, or agricultural discharges so as to exceed 40 pCi/l where naturally-occurring concentrations are less than 40 pCi/l.

35.6 TABLES

(1) Introduction

The numeric standards for various parameters in the attached tables were assigned by the Commission after a careful analysis of the data presented on actual stream conditions and on actual and potential water uses.

Numeric standards are not assigned for all parameters listed in the tables attached to Regulation No. 31. If additional numeric standards are found to be needed during future periodic reviews, they can be assigned by following the proper hearing procedures.

(2) Abbreviations:

The following abbreviations are used in the attached tables:

ac	=	acute (1-day)
Ag	=	silver
Al	=	aluminum
As	=	arsenic
B	=	boron

Ba	=	barium
Be	=	beryllium
Cd	=	cadmium
ch	=	chronic (30-day)
Cl	=	chloride
Cl ₂	=	residual chlorine
CN	=	free cyanide
CrIII	=	trivalent chromium
CrVI	=	hexavalent chromium
Cu	=	copper
dis	=	dissolved
D.O.	=	dissolved oxygen
F	=	fluoride
F.Coli	=	fecal coliforms
Fe	=	iron
Hg	=	mercury
mg/l	=	milligrams per liter
ml	=	milliliters
Mn	=	manganese
NH ₃	=	un-ionized ammonia as N(nitrogen)
Ni	=	nickel
NO ₂	=	nitrite as N (nitrogen)
NO ₃	=	nitrate as N (nitrogen)
OW	=	outstanding waters
P	=	phosphorus
Pb	=	lead
S	=	sulfide as undissociated H ₂ S (hydrogen sulfide)
Sb	=	antimony
Se	=	selenium
SO ₄	=	sulfate

sp	=	spawning
Tl	=	thallium
tr	=	trout
Trec	=	total recoverable
TVS	=	table value standard
U	=	uranium
ug/l	=	micrograms per liter
UP	=	use-protected
Zn	=	zinc

(3) Table Value Standards

In certain instances in the attached tables, the designation "TVS" is used to indicate that for a particular parameter a "table value standard" has been adopted. This designation refers to numerical criteria set forth in the Basic Standards and Methodologies for Surface Water. The criteria for which the TVS are applicable are on the following table.

TABLE VALUE STANDARDS
(Concentrations in ug/l unless noted)

PARAMETER ⁽¹⁾	TABLE VALUE STANDARDS ⁽²⁾⁽³⁾
Ammonia	Cold Water Acute = $0.43/FT/FP/2^{(4)}$ in mg/l Warm Water Acute = $0.62/FT/FP/2^{(4)}$ in mg/l
Cadmium	Acute = $e^{(1.128[\ln(\text{hardness})]-2.905)}$ "(Trout) = $e^{(1.128[\ln(\text{hardness})]-3.828)}$ Chronic = $e^{(0.7852[\ln(\text{hardness})]-3.490)}$
Chromium III	Acute = $e^{(0.819[\ln(\text{hardness})]+3.688)}$ Chronic = $e^{(0.819[\ln(\text{hardness})]+1.561)}$
Chromium VI	Acute = 16 Chronic = 11
Copper	Acute = $e^{(0.9422[\ln(\text{hardness})]-1.4634)}$ Chronic = $e^{(0.8545[\ln(\text{hardness})]-1.465)}$
Lead	Acute = $e^{(1.6148[\ln(\text{hardness})] - 2.8736)}$ Chronic = $e^{(1.417[\ln(\text{hardness})] - 5.167)}$
Nickel	Acute = $e^{(0.76[\ln(\text{hardness})]+3.33)}$ Chronic = $e^{(0.76[\ln(\text{hardness})]+1.06)}$
Selenium	Acute = 20 Chronic = 5
Silver	Acute = $e^{(1.72[\ln(\text{hardness})]-7.21)}$ Chronic = $e^{(1.72[\ln(\text{hardness})]-9.06)}$ "(Trout) = $e^{(1.72[\ln(\text{hardness})]-10.51)}$
Uranium	Acute = $e^{(1.102[\ln(\text{hardness})]+2.7088)}$ Chronic = $e^{(1.102[\ln(\text{hardness})]+2.2382)}$

TABLE VALUE STANDARDS
(Concentrations in ug/l unless noted)

PARAMETER ⁽¹⁾	TABLE VALUE STANDARDS ⁽²⁾⁽³⁾
Zinc	$\text{Acute} = e^{(0.8473(\ln(\text{hardness})) + 0.8604)}$ $\text{Chronic} = e^{(0.8473(\ln(\text{hardness})) + 0.7614)}$

TABLE VALUE STANDARDS - FOOTNOTES

- (1) Metals are stated as dissolved unless otherwise specified.
- (2) Hardness values to be used in equations are in mg/l as calcium carbonate. The hardness values used in calculating the appropriate metal standard should be based on the lower 95 per cent confidence limit of the mean hardness value at the periodic low flow criteria as determined from a regression analysis of site-specific data. Where insufficient site-specific data exists to define the mean hardness value at the periodic low flow criteria, representative regional data shall be used to perform the regression analysis. Where a regression analysis is not appropriate, a site-specific method should be used. In calculating a hardness value, regression analyses should not be extrapolated past the point that data exist.

- (3) Both acute and chronic numbers adopted as stream standards are levels not to be exceeded more than once every three years on the average.

- (4) $FT = 10^{.03(20-TCAP)}$;
TCAP less than or equal to T less than or equal to 30

$$FT = 10^{.03(20-T)}$$

0 less or equal to T less than or equal to TCAP

TCAP = 20° C cold water aquatic life species present

TCAP = 25° C cold water aquatic life species absent

FPH = 1; 8 less than pH less than or equal to 9

FPH = $\frac{1 + 10^{(7.4-pH)}}{1.25}$ 6.5 less than or equal to pH less than
1.25 or equal to 8

FPH means the acute pH adjustment factor, defined by the above formulas.

FT Means the acute temperature adjustment factor, defined by the above formulas.

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T means temperature measured in degrees celsius.

TCAP means temperature CAP; the maximum temperature which affects the toxicity of ammonia to salmonid and non-salmonid fish groups.

NOTE: If the calculated acute value is less than the calculated chronic value, then the calculated chronic value shall be used as the acute standard.

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 10 BASIN: Upper Gunnison River Basin	Desig	Classifications	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
Stream Segment Description									
1. All tributaries, including lakes, reservoirs, and wetlands, within the LaGrata Wilderness Area.	OW	Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01(tot) Ni(ac/ch)=TVS	Se (ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
2. All tributaries to the Gunnison River, including lakes, reservoirs, and wetlands, within the West Elk, Collegiate Peaks, Maroon Bells, Reggeds, Fossil Ridge, and Oh-Be-Joyful Wilderness Areas.	OW	Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₃ =0.02 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01(tot) Ni(ac/ch)=TVS	Se (ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
3. All tributaries to the Gunnison River, including lakes, reservoirs, and wetlands, within the Big Blue Wilderness Area	OW	Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O. = 6.0 mg/l D.O. (sp)=7.0 mg/l pH = 6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01(tot) Ni(ac/ch)=TVS	Se (ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
4. Mainstem of the Taylor River, including all tributaries, lakes, reservoirs, and wetlands, from the source to the confluence with the Gunnison River except for those in Segment 2.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O. =6.0 mg/l D.O. (sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01(tot) Ni(ac/ch)=TVS	Se (ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
5. Mainstem of the East River, including all tributaries, lakes, reservoirs, and wetlands, from its sources to a point immediately above the confluence with the Gunnison River, except for Segments 2, 6a and 6b.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O. =6.0 mg/l D.O. (sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01(tot) Ni(ac/ch)=TVS	Se (ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
6a. All tributaries to East River from a point immediately above its confluence with the State River to its confluence with the Gunnison except for those in Segment 6b.	UP	Aq Life Cold 2 Recreation 1 Agriculture	D.O. =6.0 mg/l D.O. (sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml						
6b. Cement Creek and all its tributaries and all lakes, reservoirs, and wetlands in the East River Drainage tributary to Segment 6a.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O. =6.0 mg/l D.O. (sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01(tot) Ni(ac/ch)=TVS	Se (ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
7. Mainstem of the State River from its source to a point immediately above the confluence with Coal Creek.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O. =6.0 mg/l D.O. (sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01(tot) Ni(ac/ch)=TVS	Se (ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
8. Mainstem of the State River from a point immediately above the confluence with Coal Creek to the confluence with the East River.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O. =6.0 mg/l D.O. (sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ch)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	e(ch)(dis) and Mn(ch)=existing ambient quality Temp Mod Exp Date of 5-30-01

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 10 BASIN: Upper Gunnison River	Design	Classifications	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC mg/l		METALS ug/l			
Stream Segment Description									
9. All tributaries, including lakes, reservoirs, and wetlands, to the State River except for specific listings in Segments 2, 10, 11, 12 and 13.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D O =6.0 mg/l D O (sp)=7.0 mg/l pH=6.5-9.0 F. Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₂ =0.05 NO ₃ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ac)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= .01(tot) Ni(ac/ch)=TVS	Se (ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
10. Mainstem of Oh-Be-Joyful Creek from the boundary of the Oh-Be-Joyful Wilderness Study area to confluence with State River.		Aq Life Cold 1 Recreation 1 Agriculture	D O =6.0 mg/l D O (sp)=7.0 mg/l pH=6.5-9.0 F. Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₂ =0.05 NO ₃ =100	As(ch)=100(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac)=TVS Pb(ch)=8 Mn(ch)= 1000 Hg(ch)= .01(tot) Ni(ac/ch)=TVS	Se (ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac)=400	
11. Mainstem of Coal Creek from a point immediately above the confluence with Elk Creek to a point immediately below the Crested Butte Water Supply intake, and Elk Creek and its tributaries and wetlands from its source to its confluence with Coal Creek		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D O =6.0 mg/l D O (sp)=7.0 mg/l pH=6.5-9.0 F. Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₂ =0.05 NO ₃ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=2.2 CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS Fe(ch)=251(dis)	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=148 Hg(ch)= .01(tot) Ni(ac/ch)=TVS	Se (ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac)=465	
12. Mainstem of Coal Creek, including all tributaries and wetlands from a point immediately below the Crested Butte Water Supply intake to the confluence with the State River, with the exception of Wildcat Creek.		Aq Life Cold 1 Recreation 2 Agriculture	D O =6.0 mg/l D O (sp)=7.0 mg/l pH=6.5-9.0 F. Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₂ =0.05 NO ₃ =100	As(ch)=100(Trec) Cd(ac)=1.9 CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS Fe(ch)=367(dis)	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=290 Hg(ch)= .01(tot) Ni(ac/ch)=TVS Se(ac/ch)=TVS	Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac)=393	
13. Mainstem of Woods Creek from the source to the confluence with Washington Gulch.	UP	Recreation 2 Agriculture	pH=5.0-9.0 F. Coli.=2000/100ml						
14. Mainstem of the Gunnison River from the confluence of the East and Taylor rivers to the inlet of Blue Mesa Reservoir.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D O =6.0 mg/l D O (sp)=7.0 mg/l pH=6.5-9.0 F. Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₂ =0.05 NO ₃ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ac)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= .01(tot) Ni(ac/ch)=TVS	Se (ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
15. All tributaries including lakes, reservoirs and wetlands to the Gunnison River from the confluence of the East and Taylor Rivers to the inlet of Blue Mesa Reservoir except for the specific listings in Segments 2, 16 thru 24.	UP	Aq Life Cold 2 Recreation 2 Water Supply Agriculture	D O =6.0 mg/l D O (sp)=7.0 mg/l pH=6.5-9.0 F. Coli=2000/100ml	CN(ac)=0.2 S(ch)=0.05 B(ch)=0.75	NO ₂ (ac)=10 Cl(ch)=250 SO ₄ (ch)=250 0	As(ac)=50 Cd(ac)=5 CrIII(ac)=50 CrVI(ac)=50 Cu(ac)=1000	Fe(ch)=300(dis) Pb(ac)=50 Mn(ch)=50 Hg(ac)=2 Ni(ch)=100	Se (ch)=50 Ag(ac)=100 Zn(ch)=5000	
16. Mainstem of Ohio Creek, including all tributaries, lakes, reservoirs, and wetlands, from the sources to the confluence with the Gunnison River with the exception of Segment 2.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D O =6.0 mg/l D O (sp)=7.0 mg/l pH=6.5-9.0 F. Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₂ =0.05 NO ₃ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ac)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= .01(tot) Ni(ac/ch)=TVS	Se (ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
17. Mainstem of Antelope Creek, including all tributaries, lakes, reservoirs, and wetlands, from the source to the confluence with the Gunnison River.	UP	Aq Life Cold 2 Recreation 2 Water Supply Agriculture	D O =6.0 mg/l D O (sp)=7.0 mg/l pH=6.5-9.0 F. Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)= .05 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₂ =0.05 NO ₃ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ac)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= .01(tot) Ni(ac/ch)=TVS	Se (ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	NH ₃ (ch)= .02 from Co Rd 17 to confluence with Gunnison River
18. Mainstem of Tomichi Creek, and its wetlands from the source to the confluence with the Gunnison River.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D O =6.0 mg/l D O (sp)=7.0 mg/l pH=6.5-9.0 F. Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₂ =0.05 NO ₃ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ac)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=57 Hg(ch)= .01(tot) Ni(ac/ch)=TVS	Se (ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 10	Desig	Classifications	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
BASIN: Upper Gunnison River			PHYSICAL and BIOLOGICAL	INORGANIC		METALS			
Stream Segment Description				mg/l		ug/l			
19. All tributaries to Tomichi Creek, including all lakes, reservoirs, and wetlands, which are on Gunnison National Forest lands, except for specific listings in Segment 21 thru 24. Mainstems of Barret, Hot Spring, Razor and Quartz Creeks from sources to confluences with Tomichi Creek.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₄ (ac)=TVS NH ₄ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
20. Mainstem of Indian Creek, including all tributaries, from the source to a point just above the confluence with Bull Creek.		Aq Life Cold 1 Recreation 2 Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₄ (ac)=TVS NH ₄ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =100	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=1000 Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) U(ch)=2000 Zn(ac/ch)=TVS	
21. Mainstem of Marshall Creek, including all tributaries, lakes, reservoirs, and wetlands, from the source to the confluence with Tomichi Creek, and mainstem of Indian Creek, including all tributaries, from a point just above the confluence of Bull Creek to the confluence with Marshall Creek.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₄ (ac)=TVS NH ₄ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1180(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
22. Mainstem of Gold Creek from Browns Gulch to confluence with Quartz Creek.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₄ (ac)=TVS NH ₄ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50(dis) Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
23. Mainstem of Cochetopa Creek, including all tributaries, lakes, reservoirs, and wetlands, from the source to a point immediately below the confluence with West Pass Creek with the exception of Segment 1.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₄ (ac)=TVS NH ₄ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ch)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
24. Mainstem of Cochetopa Creek from a point immediately below the confluence with West Pass Creek to the confluence with Tomichi Creek.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₄ (ac)=TVS NH ₄ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
25. Blue Mesa, Morrow Point and Crystal Reservoirs and those segments of the Gunnison River which are inter-connect those reservoirs		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₄ (ac)=TVS NH ₄ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
26. All tributaries to those waters described in segment 25 including all lakes, reservoirs, and wetlands, which are on Gunnison and Uncompahgre National Forest lands with the exception of Segments 1,2,3 and 28 through 32.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₄ (ac)=TVS NH ₄ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
27. All tributaries to waters of Segment 25 which are not on Gunnison and Uncompahgre National Forest lands, except for specific listings in Segments 2,3, and 28 through 32.	UP	Aq Life Cold 2 Recreation 2 Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml						

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 10	Desig	Classifications	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
BASIN: Upper Gunnison River Basin			PHYSICAL and BIOLOGICAL	INORGANIC		METALS			
Stream Segment Description				mg/l		ug/l			
28. Mainstem of Beaver, Willow (Southern tributary to Blue Mesa Reservoir), Steuben, East Elk, Cebolla, Red, Pine, Blue, Curacanti, Stumpy, Cimmaron and Crystal Creeks and Corral Gulch, including all tributaries, lakes, reservoirs and wetlands, from their sources to their confluences with the waters described in Segment 25 with the exception of Segments 1, 2 and 3.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
29. Mainstem of the Lake Fork of the Gunnison including all tributaries, lakes, reservoirs, and wetlands, from the source to Blue Mesa Reservoir, except for the specific listing in Segments 3, 30, 31 and 32.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
30. Mainstem of Henson Creek, including all tributaries and wetlands, from the source to the confluence with the Lake Fork of the Gunnison, except for the specific listing in Segments 31 and 32		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=0.9 CrIII(ch)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac)=TVS Pb(ch)=3.0 Mn(ch)=50 Hg(ch)=.01(tot)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ch)=0.1 Zn(ac)=110	
31. Mainstem of Palmetto Gulch Creek including all tributaries.	UP	Aq Life Cold 2 Recreation 2 Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml						
32. North Fork of Henson Creek including all tributaries, lakes, reservoirs and wetlands, from its source to the confluence with Henson Creek.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=.01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 10	Desig	Classifications	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
BASIN: North Fork of the Gunnison River			PHYSICAL and BIOLOGICAL	INORGANIC		METALS			
Stream Segment Description				mg/l		ug/l			
1. All tributaries to North Fork of the Gunnison River including all lakes, reservoirs, and wetlands within the West Elk and Raggeds Wilderness Areas.	OW	Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D O =8.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
2. Mainstem of North Fork of the Gunnison River from the outlet of Paonia Reservoir to the Black Bridge (4175 Drive)		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D O =8.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
3. Mainstem of North Fork of the Gunnison River from the Black Bridge (4175 Drive) to the confluence with the Gunnison River.		Aq Life Cold 1 Recreation 2 Agriculture	D O =6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =100	As(ch)=100(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=1000(Trec) Hg(ch)= 01(tot) Ni(ac/ch)=TVS Se(ac/ch)=TVS	Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
4. All tributaries to the North Fork of the Gunnison River including all lakes, reservoirs, and wetlands from the source of Muddy Creek to a point immediately below the confluence with Coal Creek; all tributaries to the North Fork of the Gunnison including all lakes, reservoirs, and wetlands, including the Grand Mesa Lakes which are on national forest lands, except for the specific listing in Segments 1 and 7.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D O =8.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1700(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
5. Mainstems of Hubbard Creek, Terror Creek, Minnesota Creek, and Leroux Creek from their boundary with national forest land to their confluences with the North Fork of the Gunnison River; mainstem of Jay Creek from its source to its confluence with the North Fork of the Gunnison River; mainstem of West Roastap Creek from its source to its confluence with Roastap Creek.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D O =8.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	Se(ch)=15 Temporary Modification Expiration Date of 8/30/02
6. All tributaries to the North Fork of the Gunnison River including all lakes, reservoirs, and wetlands which are not on national forest lands, except for the specific listings in Segments 4, 5 and 7.	UP	Aq Life Warm 2 Recreation 2 Water Supply Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	CN(ac)=0.2 S(ch)=0.05 B(ch)=0.75	NO ₃ (ac)=10 Cl(ch)=250 SO ₄ (ch)=250	As(ac)=50 Cd(ac)=5 CrIII(ac)=50 CrVI(ac)=50 Cu(ac)=1000	Fe(ch)=300(dis) Pb(ac)=50 Mn(ch)=50 Hg(ac)=2 Ni(ch)=100	Se (ch)=50 Ag(ac)=100 Zn(ch)=5000	
7. Paonia Reservoir.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O.=8.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 (Hg(ch)= 01(tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 10	Desig	Classifications	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
BASIN: Uncompahgre River			PHYSICAL and BIOLOGICAL	INORGANIC		METALS			
Stream Segment Description				mg/l		ug/l			
1. All tributaries to the Uncompahgre River, including all wetlands, lakes and reservoirs, which are within the Mt. Sneffels and Big Blue Wilderness Areas.	OW	Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O. =6.0 mg/l D.O. (sp)=7.0 mg/l pH=6.5-9.0 F. Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01(Tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
2. Mainstem of the Uncompahgre River from the source at Como Lake (Poughkeepsie Gulch) to a point immediately above the confluence with Red Mountain Creek.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O. =6.0 mg/l D.O. (sp)=7.0 mg/l pH=6.5-9.0 F. Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50 (Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ch)=50 (Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01(Tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac)=TVS Zn(ch)=120	
3. Mainstem of the Uncompahgre River, including Ridgway Reservoir, from a point immediately above the confluence with Red Mountain Creek to the Highway 550 bridge, approximately 2 miles south of Montrose.		Aq Life Cold 1 Recreation 1 Agriculture	D.O. =6.0 mg/l D.O. (sp)=7.0 mg/l pH=6.5-9.0 F. Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₃ =0.05	As(ch)=100(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1100(Trec) Pb(ac/ch)=TVS Mn(ch)=1000 Hg(ch)= 01(Tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
4. Mainstem of the Uncompahgre River from the Highway 550 bridge, approximately 2 miles south of Montrose to the confluence with the Gunnison River.	UP	Aq Life Warm 2 Recreation 2 Agriculture	D.O. =5.0 mg/l pH=6.5-9.0 F. Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.10 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.5	As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1700(Trec) Pb(ac/ch)=TVS Mn(ch)=1000 Hg(ch)= 01(Tol) Ni(ac/ch)=TVS Se(ac/ch)=TVS	Ag(ac)=TVS Ag(ch)=TVS Zn(ac/ch)=TVS	Water and Fish Organics, F. Coli=2000/100ml Temp Mod Expir Date 6/30/01 Se(ac/ch)=20 Temp Mod Expir Date 8/30/02
5. All tributaries to the Uncompahgre River, including all wetlands, lakes and reservoirs, from the source to a point immediately below the confluence with Dexter Creek, except for specific listings in Segments 1 and 6 thru 10.	UP	Aq Life Cold 2 Recreation 2 Water Supply Agriculture	D.O. =6.0 mg/l D.O. (sp)=7.0 mg/l pH=6.5-9.0 F. Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01(Tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
6. Mainstem of Red Mountain Creek from the source to the confluence with the Uncompahgre River.	UP	Recreation 2 Agriculture	pH=3.3-9.0 F. Coli=2000/100ml						
7. Mainstem of Gray Copper Gulch from the source to the confluence with Red Mountain Creek.	UP	Aq Life Cold 2 Recreation 2 Water Supply Agriculture	D.O. =6.0 mg/l D.O. (sp)=7.0 mg/l pH=6.5-9.0 F. Coli=200/100m	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1300(Trec) Pb(ac/ch)=TVS Mn(ch)=640 Hg(ch)= 01(Tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Zn(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr)	
8. Mainstem of Mineral Creek from the source to the confluence with the Uncompahgre River.	UP	Aq Life Cold 2 Recreation 2 Water Supply Agriculture	D.O. =6.0 mg/l D.O. (sp)=7.0 mg/l pH=6.5-9.0 F. Coli=200/100m	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ch)=4 CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ch)=5	Fe(ch)=300(dis) Fe(ch)=1000 (Trec) Pb(ch)=4 Mn(ch)=50(dis) Mn(ch)=1000 Ni(ac/ch)=TVS	Hg(ch)= 01(Tol) Ni(ch)=50 Se(ac/ch)=10 Ag(ch)=0.1 Zn(ch)=50	
9. Mainstem of Canyon Creek from its inception at the confluence of Imogene and Sneffels Creek to the confluence with the Uncompahgre River. Mainstem of Imogene Creek from its source to its confluence with Canyon Creek. Mainstem and all tributaries of Sneffels Creek from a point 1.5 miles above to its confluence with Canyon Creek.	UP	Aq Life Cold 2 Recreation 2 Agriculture	D.O. =6.0 mg/l D.O. (sp)=7.0 mg/l pH=6.5-9.0 F. Coli=200/100m	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₃ =0.05	As(ac)=50 (Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000 (Trec) Pb(ac/ch)=TVS Mn(ch)=1000 Hg(ch)= 01(Tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	Water and Fish Organics
10. All tributaries to the Uncompahgre River, including all wetlands, lakes and reservoirs, from a point immediately below the confluence with Dexter Creek to the South Canal near Uncompahgre, except for specific listings in Segments 11 and 12.	UP	Aq Life Cold 2 Recreation 2 Agriculture	D.O. =6.0 mg/l D.O. (sp)=7.0 mg/l pH=6.5-9.0 F. Coli=2000/100ml						

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 10	Desig	Classifications	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
BASIN: Uncompahgre River			PHYSICAL and BIOLOGICAL	INORGANIC		METALS			
Stream Segment Description				mg/l		ug/l			
11. Mainstem of Coal Creek from the source to the Park Ditch, mainstem of Dallas Creek from the source of the East and West Forks to the confluence with the Uncompahgre River, mainstem of Cow Creek, including all tributaries, lakes and reservoirs, from the Big Blue Wilderness Area boundary to the confluence with the Uncompahgre River, Billy Creek; Onion Creek and Beaton Creek from their source to their confluences with Uncompahgre River, mainstem of Beaver Creek from source to the confluence with East Fork of Dallas Creek; and mainstem of Pleasant Valley Creek from the source to the confluence with Dallas Creek.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=8.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1600(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01 (Tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
12. All tributaries to the Uncompahgre River, including all wetlands, lakes and reservoirs, from the South Canal near Uncompahgre to the confluence with the Gunnison River, except for specific listings in Segments 13, 14 and 15.	UP	Aq Life Warm 2 Recreation 2 Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml						
13. Mainstem of East Fork Dry Creek and West Fork Dry Creek from their sources to their confluence; mainstem of Spring Creek and Middle Spring Creek from the source to the confluence with the Uncompahgre River, and mainstem of Mexican Gulch from the source to the Section line dividing Section 19 and 30, T4 19 and 30, T49N, R9W.	UP	Aq Life Cold 2 Recreation 2 Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =100.0	As(ch)=100(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=1000 Hg(ch)= 01(Tot) Ni(ac/ch)=TVS Se(ac/ch)=TVS	Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	Water and Fish Organics
14. Switzer Lake.		Aq Life Warm 1 Recreation 1 Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.06 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.5	As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=1000 Hg(ch)= 01(Tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS Zn(ac/ch)=TVS	Se(ch)=18 Temporary Modification Expiration Date 8/30/02
15. Mainstem of Happy Canyon from West Canal to the confluence with the Uncompahgre River, mainstem of Horseshy Creek from the confluence with Wildcat Canyon to the confluence with the Uncompahgre River, mainstem of Dry Creek from the confluence of the East and West Forks to the boundary of BLM lands in Section 1, T49N, R11W.	UP	Aq Life Warm 2 Recreation 2 Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.06 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.5	As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=1000 Hg(ch)= 01(Tot) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS Zn(ac/ch)=TVS	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 10	Design	Classifications	NUMERIC STANDARDS							TEMPORARY MODIFICATIONS AND QUALIFIERS
BASIN: Lower Gunnison River			PHYSICAL and BIOLOGICAL	INORGANIC	METALS					
Stream Segment Description					mg/l		ug/l			
1. Mainstem of the Gunnison River from the outlet of Crystal Reservoir to a point immediately above the confluence with the Uncompahgre River.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₄ (ac)=TVS NH ₄ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01(Tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS		
2. Mainstem of the Gunnison River from a point immediately above the confluence with the Uncompahgre River to the confluence with the Colorado River.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₄ (ac)=TVS NH ₄ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =480	As(ac)=50(Trec) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ch)=TVS Fe(ch)=300(dis)	Fe(ch)=2300 Pb(ch)=TVS Mn(ch)=50 Hg(ch)=TVS Hg(ch) 01(Tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ch)=TVS	Se(ch)=8 Temporary Modification Expiration Date of 8/30/02	
3. All tributaries to the Gunnison River, including all wetlands, lakes and reservoirs, which are on national forest lands, from the outlet of Crystal Reservoir to the confluence with the Colorado River, except for specific listings in the North Fork Gunnison River, Uncompahgre River sub-basins, and segments 10 and 11.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.4-9.0 F.Coli=2000/100ml	NH ₄ (ac)=TVS NH ₄ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01(Tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS		
4. All tributaries to the Gunnison River, including all wetlands, lakes and reservoirs, which are not on national forest lands from the outlet of Crystal Reservoir to the confluence with the Colorado River, except for specific listings in the North Fork and Uncompahgre River subbasins and wetlands and in Segments 5 through 10, 12 and 13.	UP	Aq Life Warm 2 Recreation 2 Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml							
5. Mainstem of Roubideau Creek from the boundary of national forest lands to the confluence with Potter Creek; mainstem of Monitor Creek from the boundary of national forest lands to the confluence with Potter Creek; mainstem of North Fork Escalante Creek from the boundary of national forest lands to the confluence with Escalante Creek.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₄ (ac)=TVS NH ₄ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= 01(Tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS		
6. Mainstem of Roubideau Creek from Potter Creek to the Gunnison River; mainstem of Escalante Creek from the boundary of national forest lands to the Gunnison River; mainstem of Little Dominguez from the boundary of national forest lands to Big Dominguez Creek; mainstem of Big Dominguez from boundary of national forest lands to the Gunnison River; mainstem East Creek from the source to Gunnison River.	UP	Aq Life Warm 2 Recreation 1 Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₄ (ac)=TVS NH ₄ (ch)=0.06 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.5	As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=1000 Hg(ch)= 01(Tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS Zn(ac/ch)=TVS		

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 10	Desig	Classifications	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
BASIN: Lower Gunnison River			PHYSICAL and BIOLOGICAL	INORGANIC		METALS			
Stream Segment Description					mg/l			ug/l	
7. Mainstem of Surface Creek from the point of diversion of water supply to confluence with Tongue Creek, including mainstem of Ward Creek, from the boundary of national forest lands to the confluence with Tongue Creek; mainstem of Tongue Creek from the source to the confluence with the Gunnison River; mainstem of Youngs Creek from the boundary of national forest lands to the confluence with Milk Creek; mainstem of Kiser Creek from the boundary of national forest lands to the confluence with Youngs Creek.	UP	Aq Life Cold 2 Recreation 2 Agriculture	D O = 6.0 mg/l S.O (sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100m	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₃ =0.05 NO ₃ =100.0	As(ch)=100(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=1000 Hg(ch)= .01(Tol) Ni(ac/ch)=TVS Se(ac/ch)=TVS	Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	Water and Fish Organics
8. Mainstem of Surface Creek and Kannah Creek, including all tributaries, from the boundary of national forest lands to the point of diversion for public water supply, Fruite Water Supply Reservoirs I and II.	UP	Aq Life Cold 2 Recreation 2 Water Supply Agriculture	D O =6.0 mg/l D.O (sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₃ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50(dis) Mn(ch)=1000 Hg(ch)= .01(Tol)	Ni(ac/ch)=TVS Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	Water and Fish Organics
9. Fruitgrowers Reservoir	UP	Aq Life Warm 2 Recreation 1* Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.1 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₃ =100	As(ac)=50(Trec) Cd(ac/ch)=TVS CrIII(ch)=100(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS Fe(ch)=300(dis)	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50(dis) Mn(ch)=1000 Hg(ch)= .01(Tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	*Goal Qualifier F.Coli=2000/100ml NH ₃ (ac/ch)=existing ambient quality Temp. Mod Effect Until 6/30/01
10. Mainstem of the Smith Fork from the confluence of the North Smith Fork and South Smith Fork to the confluence with the Gunnison River.		Aq Life Cold 1 Recreation 1 Agriculture	D.O.=6.0 mg/l D.O (sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₃ =100	As(ch)=100(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=1000 Hg(ch)= .01(Tol) Ni(ac/ch)=TVS Se(ac/ch)=TVS	Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
11. All tributaries to the Smith Fork, including all wetlands, lakes and reservoirs, which are on national forest lands.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O (sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₃ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= .01(Tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Se(ac/ch)=TVS Zn(ac/ch)=TVS	
12. All tributaries to the Smith Fork, including all wetlands, lakes and reservoirs, which are not on national forest lands, except for the specific listing in Segment 11.	UP	Aq Life Warm 2 Recreation 2 Agriculture	D.O. = 5.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml						
13. Crawford Reservoir.		Aq Life Cold 1 Recreation 1 Agriculture	D.O.=6.0 mg/l D.O (sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₃ =100	As(ch)=100(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=1000 Hg(ch)= .01(Tol) Ni(ac/ch)=TVS Se(ac/ch)=TVS	Ag(ac)=TVS Zn(ac/ch)=TVS Ag(ch)=TVS(lr)	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 10	Desig	Classifications	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
BASIN: San Miguel River			PHYSICAL and BIOLOGICAL	INORGANIC	METALS				
Stream Segment Description					mg/l	ug/l			
1. All streams, lakes, reservoirs, and wetlands within the boundaries of the Lizard Head, and Mount Sneffels Wilderness Areas.	OW	Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
2. All tributaries including all lakes, reservoirs, and wetlands to the San Miguel River from its sources to a point immediately below the confluence of Leopard Creek with the exceptions listed in Segments 1, 6, 7a, 7b and 8.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100m l	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
3a. Mainstem of San Miguel River from the confluence of Bridal Veil and Ingram Creeks to a point immediately above the confluence of Marshall Creek.		Aq Life Cold 1 Recreation 2	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100m l	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05	As(ac)=50(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=1000 Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Zn(ch)=190	Zn(ch)=410 Temporary Modification Effective until 6/30/02
3b. San Miguel River from a point immediately above the confluence of Marshall Creek to a point immediately above the confluence of South Fork San Miguel River.		Aq Life Cold 1 Recreation 1	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100m	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05	As(ac)=50(Trec) Cd(ac)=TVS(lr) CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ch)=TVS	Fe(ch)=1000(Trec) Pb(ch)=TVS Mn(ch)=1000 Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ch)=190	Cd(ch)=2.13, Mn(ch)=462, and Zn(ch)=640, Temporary Modifications Effective until 6/30/02
4. Mainstem of the San Miguel River from a point immediately above the confluence of the South Fork of the San Miguel to a point immediately below the confluence of Naturita Creek.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
5. Mainstem of San Miguel River from a point immediately below the confluence of Naturita Creek to its confluence with the Dolores River.		Aq Life Warm 1 Recreation 1 Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.06 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.5	As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=1000(Trec) Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS Zn(ac/ch)=TVS	
6a. Mainstem of Ingram Creek including all tributaries, lakes, reservoirs, and wetlands from source to confluence with San Miguel River.		Aq Life Cold 2 Recreation 2	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05	As(ac)=50(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=1000 Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Zn(ch)=190	
6b. Mainstem of Marshall Creek including all tributaries, lakes, reservoirs, and wetlands from source to confluence with San Miguel River.		Aq Life Cold 2 Recreation 2	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05	As(ac)=50(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=1200 Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Zn(ch)=190	

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 10 BASIN: San Miguel River Stream Segment Description	Desig	Classifications	NUMERIC STANDARDS						TEMPORARY MODIFICATIONS AND QUALIFIERS
			PHYSICAL and BIOLOGICAL	INORGANIC	METALS				
				mg/l		ug/l			
7a. Mainstem of Howard Fork and all tributaries, lakes, reservoirs, and wetlands from immediately below the confluence of Swamp Gulch to its confluence with the South Fork of the San Miguel, except for Segment 7b.		Aq Life Cold 1 Recreation 2 Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=1000 Hg(ch)=.01(tol) Ni(ac/ch)=TVS Se(ac/ch)=TVS	Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
7b. Waterfall Creek, including all tributaries, lakes, reservoirs, and wetlands from its source to its confluence with the Howard Fork.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
8. Mainstem of South Fork of San Miguel River from the confluence of the Howard and Lake Forks to its confluence with the San Miguel River.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=100 Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
9. All tributaries to the San Miguel River, including all lakes, reservoirs, and wetlands from a point immediately below the confluence of Leopard Creek to the Dolores River that are within the boundaries of the Uncompahgre National Forest.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
10. Mainstem of Naturita Creek from the Uncompahgre National Forest boundary to its confluence with the San Miguel River, and Gourley Reservoir, Tebegusche Creek from its source to the confluence with San Miguel River.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=75 Hg(ch)=.01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
11. West Fork of Naturita Creek including all tributaries, lakes, reservoirs, and wetlands, and Miramonte Reservoir from its source to the Uncompahgre National Forest boundary below Miramonte Reservoir and the mainstem of Beaver, Horsefly and Seltado Creeks from the Uncompahgre National Forest boundary to their confluence with the San Miguel River.		Aq Life Cold 1 Recreation 1 Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN=.005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=1000(Trec) Hg(ch)=.01(tol) Ni(ac/ch)=TVS Se(ac/ch)=TVS	Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS	
12. All tributaries, lakes, reservoirs, and wetlands to the San Miguel River from a point immediately below the confluence of Leopard Creek to the Dolores River with the exceptions listed in Segments 9, 10 and 11.	UP	Aq Life Cold 2 Recreation 2 Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml						

STREAM CLASSIFICATIONS and WATER QUALITY STANDARDS

REGION: 10	Desig	Classifications	NUMERIC STANDARDS							TEMPORARY MODIFICATIONS AND QUALIFIERS
BASIN: Lower Dolores River			PHYSICAL and BIOLOGICAL	INORGANIC		METALS				
Stream Segment Description				mg/l		ug/l				
1. Mainstem of the Dolores River from the bridge at Bradfield Ranch (Forest Route 505) to the Little Gypsum Valley Bridge at the San Miguel/Montrose County Line.		Aq Life Cold 1 Recreation 1 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= .01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS		
2. Mainstem of the Dolores River from the Little Gypsum Valley Bridge at the San Miguel/Montrose County line, to the Colorado/Utah border.		Aq Life Warm 1 Recreation 1 Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.06 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₃ =0.5	As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)= 1000(Trec) Pb(ac/ch)=TVS Mn(ch)=1000 Hg(ch)= .01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS Zn(ac/ch)=TVS		
3. All tributaries to the Dolores River, including all lakes, reservoirs and wetlands, from the bridge at Bradfield Ranch to the Colorado/Utah border, except for specific listings in Segments 4 and 5.	UP	Aq Life Warm 2 Recreation 2 Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=2000/100ml							
4. Mainstem of West Paradox Creek from the source to the confluence with the Dolores River.	UP	Aq Life Warm 2 Recreation 2 Agriculture	D.O.=5.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.06 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₃ =0.5	As(ch)=100(Trec) Cd(ac/ch)=TVS CrIII(ac/ch)=TVS CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=1000 Hg(ch)= .01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS Zn(ac/ch)=TVS		
5. Mainstem of West Creek from the source to the confluence with the Dolores River; Roc Creek; La Sal Creek and Mesa Creek from their sources to their confluences with Dolores River.		Aq Life Cold 1 Recreation 2 Water Supply Agriculture	D.O.=6.0 mg/l D.O.(sp)=7.0 mg/l pH=6.5-9.0 F.Coli=200/100ml	NH ₃ (ac)=TVS NH ₃ (ch)=0.02 Cl ₂ (ac)=0.019 Cl ₂ (ch)=0.011 CN= .005	S=0.002 B=0.75 NO ₃ =0.05 NO ₂ =10 Cl=250 SO ₄ =250	As(ac)=50(Trec) Cd(ac)=TVS(lr) Cd(ch)=TVS CrIII(ac)=50(Trec) CrVI(ac/ch)=TVS Cu(ac/ch)=TVS	Fe(ch)=300(dis) Fe(ch)=1000(Trec) Pb(ac/ch)=TVS Mn(ch)=50 Hg(ch)= .01(tol) Ni(ac/ch)=TVS	Se(ac/ch)=TVS Ag(ac)=TVS Ag(ch)=TVS(lr) Zn(ac/ch)=TVS		

35.7 - 35.10 Reserved

35.11 STATEMENT OF BASIS AND PURPOSE

I. Introduction

These stream classifications and water quality standards for State Waters of the Gunnison River Basin including all tributaries and standing bodies of water in all or parts of Gunnison, Delta, Montrose, Ouray, Mesa, Saguache, and Hinsdale Counties and the Lower Dolores River and its tributaries in Dolores and San Miguel Counties implement requirements of the Colorado Water Quality Control Act C.R.S. 1973, 25-8-101 et seq. (Cum. Supp. 1981). They also represent the implementation of the Commission's Regulations Establishing Basic Standards and an Antidegradation Standard and Establishing a System for Classifying State Waters, for Assigning Standards, and for Granting Temporary Modifications (the "Basic Regulations")

The Basic Regulations establish a system for the classification of State Waters according to the beneficial uses for which they are suitable or are to become suitable, and for assigning specific numerical water quality standards according to such classifications. Because these stream classifications and standards implement the Basic Regulations, the statement of basis and purpose (Section 3.1.16) of those regulations must be referred to for a complete understanding of the basis and purpose of the regulations adopted herein. Therefore, Section 3.1.16 of the Basic Regulations is incorporated by reference. The focus of this statement of basis and purpose is on the scientific and technological rationale for the specific classifications and standards in the Gunnison River Basin.

Public participation was a significant factor in the development of these regulations. A lengthy record was built through public hearings held on November 16-18, 1981. A total of 10 entities requested and were granted party status by the



Commission in accordance with the Commission's Procedural Regulations (Cum. Supp. 1980). The record established in these hearings forms the basis for the classifications and standards adopted.

II. General Considerations

These regulations are not adopted as control regulations. Stream classifications and water quality standards are specifically distinguished from control regulations in the Water Quality Control Act, and they need not be adopted as control regulations pursuant to the statutory scheme.

III. Definition of Stream Segments

1. For purposes of adopting classifications and water quality standards, the streams and water bodies are identified according to river basin and specific water segments.
2. Within each river basin, specific water segments are defined, for which use classifications and numeric water quality standards, if appropriate, are adopted. These segments may constitute a specified stretch of a river mainstem, a specific tributary, a specific lake or reservoir, or a generally defined grouping of waters within the basin (e.g., a specific mainstem segment and all tributaries flowing into that mainstem segment).
3. Segments are generally defined according to the points at which the use, water quality, or other stream characteristics change significantly enough to require a change in use classification and/or water quality standards. In many cases, such transition points can be specifically identified from available data. In other cases the delineation of segments is based upon best judgments of the points where instream changes in uses, water quality, or other stream characteristics occur.



IV. Use Classifications and Standards -- Generally

1. Initially, recommendations for stream segmentation and use classifications are a result of input from 208 plans, water quality data and reports, the Division of Wildlife, and personal knowledge. After a basic outline of stream segments and use classifications was prepared, water quality data from a variety of sources was compared against the "table value" for the proposed use. "Table value" refers to the four tables attached to the "Basic Regulations". In general, if the mean plus one standard deviation ($\bar{x} + s$) of the available data for the segment indicated that a particular parameter did not exceed the "table value" for that recommended use, the "table value" was listed as the recommended standard for the parameter. If the $\bar{x} + s$ computation indicated that the instream concentrations of the parameter exceeded the "table value" and yet the use to be protected by that parameter was in place, then the $\bar{x} + s$ value was recommended as the standard for that parameter.

Conversely, if the ambient quality ($\bar{x} + s$) for a certain parameter exceeded the "table value" for the protection of a use, and there is information that the use is not in place, the use classification was modified or temporary modifications to the parameters were established. Ambient quality is generally defined as the quality attributable to natural conditions and/or uncontrollable non-point sources.

2. The use classifications have been established in accordance with the provisions of Section 203 of the Water Quality Control Act and Section 3.1.6 and 3.1.13 of the Basic Regulations.
3. In most cases upstream segments of a stream are generally the same as, or higher in classification, than downstream segments in order to protect downstream uses. In a few cases, tributaries are classified at lower classifications than mainstems where flow from tributaries does not threaten the quality of mainstem waters and where the evidence indicates that lower classification for the tributaries is appropriate. In either case, permits should be written to assure compliance with Water Quality Standards and any stream segment affected by a discharge.



4.A. The Commission has determined that it has the authority to assign the classification "High Quality Waters - Class 1" and "High Quality Waters - Class 2" where the evidence indicates that the requirements of Sections 3.1.13(1)(e) of the basic regulations are met. A question exists as to whether existing diversion structures can be maintained consistent with a "High Quality - Class 1" designation. Because of the questions regarding authority to regulate diversions, the Class 1 designation was deemed potentially too rigid. The Commission recognizes its authority to upgrade these segments if and when it is appropriate to do so. Streams have been classified "High Quality - Class 2" for one or more of the following reasons:

- (a) to facilitate the enjoyment and use of the scenic and natural resources of the State in accordance with the Legislative Declaration of the Colorado Water Quality Control Act (25-8-102(1) C.R.S. 1973.
- (b) to provide a high degree of protection deserving of wilderness areas which are a resource providing a unique experience.
- (c) to protect threatened species or to protect wild and scenic river study areas or wilderness areas.

The concern of the United States Forest Service that High Quality 2 classification will unduly burden their management of multiple use areas is not well founded. This is because activities on Forest Service land, i. e. grazing, mineral exploration, trail and road maintenance, are considered as a historical impact upon existing ambient water quality conditions, and are non point sources which are presently not subject to any Water Quality Control Commission regulations.

B. The "High Quality Class 2" classification was proposed by the Gunnison River Coalition and other witnesses for a number of segments. These proposals have been rejected, and the segments classified for specific uses, for the following reasons:



(a) High quality classifications represent extraordinary categories, and their use is optional at the discretion of the Commission;

(b) It is important in these cases to assign specific water quality standards to protect the highest specific use classifications, and only specific use classification provide the mechanism for assigning such standards.

5. In accordance with 25-8-104, C.R.S. 1973, the Commission intends that no provision of this regulation shall be interpreted so as to supercede, abrogate, or impair rights to divert water and apply water to beneficial uses.

6. Recreation -- Class 1 and Class 2

In addition to the significant distinction between Recreation - Class 1 and Recreation - Class 2 as defined in Section 3.1.13(1) of the Basic Regulations, the difference between the two classifications in terms of water quality standards is the fecal coliform parameter. Recreation - Class 1 generally has a standard of 200 fecal coliform per 100 ml; Recreation - Class 2 generally has a standard of 2000 fecal coliform per 100 ml.

In accordance with the Colorado Water Quality Control Act, the Commission has decided to classify as "Recreation - Class 2" those stream segments where primary contact recreation does not exist and cannot be reasonably expected to exist in the future, regardless of water quality. The Commission has decided to classify as "Recreation - Class 1" only those stream segments where primary contact recreation actually exists, or could reasonably be expected to occur. The reasons for the application of Recreation Class 2 are as follows:

(a) The mountain streams in this region are generally unsuitable for primary contact recreation because of low water temperature and low stream flows.



- (b) Fecal coliform is an indicator organism. Its presence does not always indicate the presence of pathogens. This depends on the source of the fecal coliform. If the source is agricultural runoff as opposed to human sewage, there may be no health hazard and therefore no significant need to reduce the presence of fecal coliform to the 200 per 100 ml. level. Also, control of nonpoint sources is very difficult.
- (c) Treating sewage to meet the 200 per 100 ml. level generally means the treatment plant must heavily chlorinate its effluent to meet the limitation. The presence of chlorine in the effluent can be significantly detrimental to aquatic life. Post-treatment of effluent to meet the residual chlorine standard is expensive and often results in the addition of more chemicals which have a negative effect on water quality and can be detrimental to aquatic life. Therefore, reducing the need for chlorine is beneficial to aquatic life.
- (d) Even where a treatment plant in this region might treat its effluent to attain the standard of 200 per 100 ml., agricultural runoff and irrigation return flows below the plant may result in the rapid increase of fecal coliform levels. Therefore, the benefits of further treatment are questionable.
- (e) The fecal coliform standard of 2000 per 100 ml. has been established to provide general public health protection. There is no significant impact on domestic drinking water treatment plants because they provide complete disinfection. The standard of 200 per 100 ml. is not intended to protect the water supply classification.



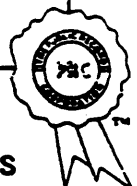
7. Water Supply Classification

The Commission finds that Colorado is a water short state and that it is experiencing considerable growth which places additional burdens on already scarce water supplies. These considerations mitigate in favor of a conservative approach to protecting future water supplies. Where existing water quality is adequate to protect this use, and in the absence of dischargers to these segments or testimony in opposition to such classification, the water supply use has been assigned because it is reasonable to expect that it may exist in the future in such cases. For stream segments that flow through, or in the vicinity of, municipalities, this conclusion is further justified, since there is a reasonable probability that the use exists or will exist. Where the water supply classification has been opposed, the Commission has evaluated the evidence on a site specific basis, and in many cases the classification has been removed.

V. Water Quality Standards -- Generally

1. The water quality standards for classified stream segments are defined as numeric values for specific water quality parameters. These numeric standards are adopted as the limits for chemical constituents and other parameters necessary to protect adequately the classified uses in all stream segments.
2. Not all of the parameters listed in the "Tables" appended to the Basic Regulations are assigned as water quality standards. This complies with Section 3.1.7(c) of the Basic Regulations.

Numeric standards have been assigned for the full range of parameters to a number of segments where little or no data existed specific to the segment. In these cases, there was reason to believe that the classified uses were in place or could be reasonably expected, and that the ambient water quality was as good as or better than the numeric standards assigned.



3. A numeric standard for the temperature parameter has been adopted as a basic standard applicable to all waters of the region in the same manner as the basic standards in Section 3.1.11 of the Basic Regulations.

The standard of a 3 °C temperature increase above ambient water temperature as defined is generally valid based on the data regarding that temperature necessary to support an "Aquatic Life - Class 1" fishery. The standard takes into account daily and seasonal fluctuations; however, it is also recognized that the 3 °C limitation as defined is only appropriate as a guideline and cannot be rigidly applied if the intention is to protect aquatic life. In winter, for example, warm water discharges may be beneficial to aquatic life. It is the intention of the Commission in adopting the standard to prevent radical temperature changes in short periods of time which are detrimental to aquatic life.

4. Numeric standards for seventeen organic parameters have been adopted as basic standards applicable to all waters of the region in the same manner as the basic standards in Section 3.1.11 of the Basic Regulations. These standards are essential to a program designed to protect the waters of the State regardless of specific use classifications because they describe the fundamental conditions that all waters must meet to be suitable for any use.

It is the decision of the Commission to adopt these standards as basic standards because the presence of the organic parameters is not generally suspected. Also, the values assigned for these standards are not detectable using routine methodology and there is some concern regarding the potential for monitoring requirements if the standards are placed on specific streams. This concern should be alleviated by Section 3.1.14(5) of the Basic Regulations but there is uncertainty regarding the interpretation of those numbers by other entities. Regardless of these concerns, because these constituents are highly toxic, there is a need for regulating their presence in State waters. Because the Commission has determined that they have uniform applicability here, their inclusion as basic standards for the region accomplishes this purpose.



5. In many cases, the numeric water quality standards are taken from the "Tables" appended to the Basic Regulations. These table values are used where actual ambient water quality data in a segment indicates that the existing quality is substantially equivalent to, or better than, the corresponding table values. This has been done because the table values are adequate to protect the classified uses.

Consistent with the Basic Regulations, the Commission has not assumed that the table values have presumptive validity or applicability. This accounts for the extensive data in the record on ambient water quality. However, the Commission has found that the table values are generally sufficient to protect the use classifications. Therefore, they have been applied in the situations outlined in the preceeding paragraph as well as in those cases where there is insufficient data in the record to justify the establishment of different standards. The documentary evidence forming the basis for the table values is included in the record.

6. In many cases, instream ambient water quality provides the basis for the water quality standards (See 7 below). In those cases where the classified uses presently exist or have a reasonable potential to exist despite the fact that instream data reflects ambient conditions of lower water quality than the table values, instream values have been used. In these cases, the evidence indicates that instream values are adequate to protect the uses. In those cases where temporary modifications are appropriate, instream values are generally reflected in the temporary modification and table values are reflected in the corresponding water quality standard. (Goals are established for the appropriate classification affected by the parameter).



Cases in which water quality standards reflect these instream values usually involve the metal parameters. On many stream segments elevated levels of metals are present due to natural or unknown causes, as well as mine seepage from inactive or abandoned mines. These sources are difficult to identify and impractical or impossible to control. The classified aquatic life uses may be impacted and/or may have adjusted to the condition. In either case, the water quality standards are deemed sufficient to protect the uses that are present.

7. In those cases where there was no data for a particular segment, or where the data consists of only a few samples for a limited range of parameters, "table values" were generally recommended. Data at the nearest downstream point was used to support this conclusion. In some cases, where the limited data indicated a problem existed, additional data was collected to expand the data base. Additionally, where there may not be existing data on present stream quality, the Commission anticipates that if necessary, additional data will be collected prior to an economic reasonableness hearing required by C.R.S. 1973, 25-8-204(3), as amended.
8. In most cases in establishing standards based on instream ambient water quality, a calculation is made based upon the mean (average) plus one standard deviation ($\bar{x} + s$) for all sampling points on a particular stream segment. Since a standard deviation is not added to the water quality standard for purposes of determining the compliance with the standard, this is a fair method as applied to discharges.

Levels that were determined to be below the detectable limits of the sampling methodology employed were averaged in as zero rather than at the detectable limit. This moves the mean down but since zero is also used when calculating wasteload allocations, this method is not unfair to dischargers.



Metals present in water samples may be tied up in suspended solids when the water is present in the stream. In this form they are not "available" to fish and may not be detrimental to aquatic life. Because the data of record does not distinguish as to availability, some deviation from table values, and the use of $\bar{x} + s$, is further justified because it is unlikely that the total value in all samples analyzed is in available form.

A number of different statistical methodologies could have been used where ambient water quality data dictates the standards. All of them have both advantages and disadvantages. It is recognized that the $\bar{x} + s$ methodology also has weaknesses, in that the standard may not reflect natural conditions in a stream 100 per cent of the time, even though the use of $\bar{x} + s$ already allows for some seasonal variability. However the use of this methodology is justified since it provides a meaningful index of stream quality for setting stream standards.

Since the $\bar{x} + s$ methodology is an index of existing conditions and is not a classical statistical description, use of a methodology which eliminates outliers, i.e. unusually high or low data which may be in error, is acceptable in approximating an average condition. The practice of eliminating only extremely high recorded data points and not low recorded values may result in erring on the side of safety. High recorded values may be due to sampling, laboratory, or recording error. To a limited degree the high values may be due to seasonal variation in the data base.

Finally, the fairness and consistency of the use of any methodology in setting standards must recognize the manner in which the standards are implemented and enforced. It is essential that there be consistency between standard setting and the manner in which attainment or non-attainment of the standards is established based on future stream monitoring data. In addition the Division must take this methodology into account in writing and enforcing discharge permits.



9. No water quality standards are set below detectable limits for any parameter, although certain parameters may not be detectable at the limit of the standards using routine methodology. However, it must be noted that stream monitoring, as opposed to effluent monitoring, is generally not the responsibility of the dischargers but of the State. Furthermore, the purpose of the standards is to protect the classified uses and some inconvenience and expense as to monitoring is therefore justifiable.

Section 3.1.15(5) of the Basic Regulations states that "dischargers will not be required to regularly monitor for any parameters that are not identified by the Division as being of concern". Generally, there is no requirement for monitoring unless a parameter is in the effluent guidelines for the relevant industry, or is deemed to be a problem as to a specific discharge.

Some of the data developed by AMAX for metals values were based on a "direct aspiration" testing method. This testing method has a detection limit 100 times higher than the furnace method used by the Division. In using "direct aspiration", detection limit is above some of the proposed metal values. Therefore, the Commission chose to disregard this data. Because water quality standards are set at levels of ten times below detection limits of the direct aspiration testing method, it is appropriate to use data based upon detection limits of the Health Department Laboratory. These detection limits for establishing water quality standards may be more restrictive than EPA detection limits for effluent monitoring.

10. The dissolved oxygen standard is intended to apply to the epilimnion and metalimnion strata of lakes and reservoirs. Respiration by aerobic micro-organisms, as organic matter is consumed, is the primary cause of a natural decrease in dissolved oxygen and anaerobic conditions in the hypolimnion. Therefore, this stratum is exempt from the dissolved oxygen standard.



11. Where numeric standards are established based on historic instream water quality data at the level of $\bar{x} + s$, it is recognized by the Commission that measured instream parameter levels might exceed the standard approximately 15 percent of the time.
12. It is the Commission's intention that the Division implement and enforce all water quality standards consistent with the manner in which they have been established.

13. Hardness/Alkalinity

Where hardness and alkalinity numbers differed, the Commission elected to use alkalinity as the controlling parameter, in order to be consistent with other river basins and because testimony from the Division staff indicated that in most cases alkalinity has a greater effect on toxic form of metals than does hardness.

VI. Water Quality Standards for Unionized Ammonia

The Commission retains the use of unionized ammonia as a parameter rather than total ammonia because unionized ammonia is the toxic portion. Furthermore, the relationship of total ammonia as a function of temperature and pH is recognized.

On some Class 2 Warm Water Aquatic Life streams containing similar aquatic life communities to those found in the plains streams of the South Platte & Arkansas Basins, .1 mg/l ammonia was selected as being appropriate to protect such aquatic life.

The Commission has relaxed unionized ammonia standards to .1 mg/l or greater on several streams for the following reasons:

1. limited nature of the aquatic life present;
2. limited recreational value of species present;



3. habitat limitations, primarily flow and streambed characteristics, that impose significant limitations on the nature of aquatic life, even if ammonia reductions were attained;
4. rapid dissipation of ammonia in streams, reducing the impact of such discharges downstream; and
5. economic costs of ammonia removal, especially where such costs would fall primarily on publicly-owned treatment works, and while the availability of construction grant funds is questionable.
6. Biosurveys with support from a bioassay conducted on fathead minnows performed in the Cache la Poudre River show that a .1 mg/l standard is appropriate to protect existing biota in that stream. The results of these studies may be reasonably extrapolated to similar streams; i.e., those streams that demonstrate similar chemical, physical, and biological characteristics.

Not all warmwater streams are comparable in terms of flow and habitat, and types and numbers of species of aquatic life. Therefore, some variations in an appropriate ammonia standard must be tolerated, with the objective of protecting existing aquatic life. The Commission found this approach preferable to totally removing the aquatic life classification from impacted or marginal aquatic life streams.

VII. Water Quality Standards for Uranium

Given the threat that radioactivity from uranium may pose to human health, it is advisable to limit uranium concentrations in streams to the maximum extent practicable. For segments assigned a water supply classification the Commission has adopted a standard of 40 pCi/l or natural background where higher, for the following reasons:



1. 40 pCi/l generally reflects background concentrations of uranium that may be found in streams in Colorado and therefore this amount approximates routine human exposure.
2. The statistical risk of human health hazards is small at 40 pCi/l.
3. 40 pCi/l is an interim level, established now pending the outcome of further studies currently underway.

VIII. Water Quality Standards for Cyanide

The Commission acknowledges that total cyanide is to be used in State Discharge Permits until a method is authorized by EPA for measuring free cyanide, even though free cyanide is the parameter of concern.

IX. Water Quality Standards for Metals

Several parties were concerned about the methods that were employed to digest samples used to determine ambient metal values. The Commission heard testimony that when high suspended solids are present, the two methods of sample digestion could result in very different values, with the "total" method yielding the higher values. But, when the suspended solids are low, the two digestion methods will result in similar values. Therefore, the Commission has incorporated data generated by the "total" method when it could be determined that the suspended solids in the water sample were low.

The Commission believes that the "total recoverable" or equivalent method should be used as a testing method for determining ambient metal values for streams. This method is a better indicator in determining the amount of metal available to aquatic life in a toxic form, particularly when the amount of suspended solids carried by the stream is high. However, with low suspended solids the two testing methods should yield the same result. Therefore, before incorporating into stream standards data generated by the "total" method it must be verified that there are low suspended solids in the water samples tested.



The United States Geological Survey used the "total" method before 1978 and the "total recoverable" after 1978, and that because of this, there might be some inconsistency in the STORET data. The Commission believes that with the proper check on suspended solids, pre-1976 STORET data can be used to determine ambient stream values.

It was suggested by AMAX that since the "total" method is used in monitoring state discharge permits, then the "total" method should be used in setting stream standards. The Commission does not agree. For the reasons already stated, the Commission believes that the "total recoverable" method is preferable for assigning water quality standards. And, since most state discharge permits limit suspended solids to 30 mg/l, effluent testing will be similar to the methods underlying stream standards.

X. Linkage of classifications and Standards

The Commission holds that the classifications which it adopts and the standards it assigns to them are linked. Disapproval by EPA of the standards may require reexamination by the Commission of the appropriateness of its original classification. The reason for the linkage is that the Commission recognizes that there is a wide variability in the types of aquatic life in Colorado streams which require different levels of protection. Therefore, the numbers were chosen in some cases on a site specific basis to protect the species existing in that segment. If any reclassification is deemed a downgrading, then it will be based upon the grounds that the original classification was in error.

XI. Economic Reasonableness

The Commission finds that these use classifications and water quality standards are economically reasonable. The Commission solicited and considered evidence of the economic impacts of these regulations. This evaluation necessarily involved a case-by-case consideration of such



impacts, and reference is made to the fiscal impact statement for this analysis. Generally, a judgment was made as to whether the benefits in terms of improving water quality justified the costs of increased treatment. In the absence of evidence on economic impacts for a specific segment, the Commission concluded that the regulations impose no unreasonable economic burden.

XII. Classifications and Standards - Special Cases

1. Page 1, Segment 6(a), 6(b), and 6(c)
(proposed as page 1, segment 6)

Segment 6(a) receives a discharge from the Roaring Judy fish hatchery. 6(a) contains the tributaries to the mainstem which are intermittent. The perennial tributaries to the mainstem are included in segment 6(b). The Commission found no evidence of water supply use associated with segment 6(b) which contains fisheries.

2. Page 2, Segments 7 and 8

Water supply was retained for both segments because segment 8 is subject to conditional water rights held by the Town of Crested Butte. The agriculture classification was retained because the use is currently in place.

3. Page 2, Segment 9

Segment 9 represents the mainstem of the Slate River from the point immediately above its confluence with Coal Creek to its confluence with the East River. The Division's initial proposal was based on 17 samples taken during 1979 through 1981. These data were significantly influenced by heavy metals entering the Slate River from Coal Creek. In May of 1981 Amax commenced operation of the wastewater treatment facility treating discharges to Coal Creek, a tributary of the Slate River. By July, 1981 steady state operation had been achieved. In view of the significant change in ambient water quality resulting from the operation of the wastewater treatment plant, the Commission adopted the Division's suggestion that the record on this segment be kept open to receive



more meaningful data. The water quality standards adopted by the Commission are based on combined Amax and Storet data during the period of record July, 1981 through June, 1982. The water quality standards adopted for this segment are table values from the 0-100 hardness/alkalinity column, with the exception of cadmium, copper, lead and zinc. The standards for these parameters were based on $\bar{x} + s$ values derived from the combined Amax and Storet data for the twelve month period of record. The Storet data was in terms of total recoverable while Amax data was in terms of total metals. The cadmium level of 0.03 mg/l taken on November 12, 1981 was discarded as an outlier. All Amax data used had total suspended solids of less than 30 milligrams per liter. The monitoring location for Segment 9 was at the wooden bridge on Highway 135, 0.25 miles below the Crested Butte domestic wastewater treatment plant.

Adoption of an aquatic life, class 1 classification with a 0.02 mg/l unionized ammonia standard presents the potential for economic impact upon the Town of Crested Butte. The Commission acknowledged the potential, for requirements necessitating nitrification facilities but found it justified for the following reasons: (1) There is no clear and present threat of immediate economic impact; (2) Future impact, if ammonia removal becomes necessary, will be spread among a substantial population base and thus per capita impact will be small; (3) Several interim options are available to the district to further postpone and reduce the probability of significant economic impact; and (4) The Town testified that it was willing to assume the potential for economic impact in order to protect the quality of this segment as it provides a significant contribution to the local recreational resources which account for a substantial portion of the economic base in the region.



In view of the factors that mitigate the near-term potential for economic impact and since the most likely impacted entity supports this classification, the Commission finds that the assignment of a class 1 designation is economically reasonable.

4. Page 2, Segment 10

This segment receives effluent from the Crested Butte Water and Sanitation District by way of Woods Creek. Existing aquatic life supports a class 1 cold water classification. A report by Camp, Dresser, and McKee describes a less expensive alternative to ammonia removal which could be implemented ammonia as an interim treatment to greatly delay the necessity of nitrification facilities. The Commission acknowledges that removal will probably be required for the Crested Butte W & S District's wastewater treatment plant as they reach the maximum population in their masterplan. Ammonia removal maybe required in the near future, but a report by Camp, Dresser, & McKee describes a less expensive alternative which could be implemented. Notwithstanding such improvements, ammonia removal may be required to provide services for the maximum population projected in the master plan. The Commission believes that the cost of ammonia removal when it is ultimately required is economically reasonable because of the large population base which will be available to support this requirement and the economic importance of recreational fisheries to communities in this area.

5. Page 3, Segment 12

In the initial proposal, Segment 12 included the mainstem of Coal Creek from a point immediately above the confluence with Elk Creek to a point immediately below the Crested Butte water supply intake. Elk Creek and its tributaries were added to this segment since water quality sampling indicated that the water quality of Elk Creek and Coal Creek are similar. Although a recreation class 2 was adopted for this segment a fecal coliform standard of 200 per 100 m/l was adopted by agreement of the interested parties and because the standard is currently met.



6. Page 3, Segment 13

The Division's initial proposal for this segment was based on four samples taken prior to the startup of the Amax wastewater treatment facility in July of 1981. This facility treats the discharge from the inactive Keystone Mine which is the principal point source discharger into Coal Creek. In view of the significant change in ambient water quality resulting from operation of the wastewater treatment plant, the Commission in effect adopted the Division's suggestion that the record on this segment be kept open to receive more meaningful data. The aquatic life cold water class 1 use classification for this segment is based on ambient flow ($Q_7-10 = 3.5$ CFS), quality conditions with continuous operation of the Amax wastewater treatment facility, and presence of aquatic life. These standards include consideration of the existing discharge and it is not anticipated that additional treatment will be required. Where water quality data was available, the water quality standards adopted for this segment were developed based upon the ambient flow conditions and water quality in this segment for those parameters. Only cadmium and zinc were greater than table values in the 100-200 hardness/alkalinity range. If Crested Butte fully exercised its decreed water right in Segment 12, the flow in Segment 13 would essentially be the discharge from the Amax wastewater treatment facility. This flow is in the greater than 400 hardness/alkalinity range. If changes in flow conditions occur or if data subsequently becomes available for water quality standards based on table values, these water quality standards should be reviewed for compatibility with ambient conditions. The water quality standards for cadmium and zinc are $\bar{x} + s$ values based on Amax data for the twelve month period of record of July, 1981 through June, 1982. This data is in terms of total metals. However, all data had suspended solids of less than 30 milligrams per liter. The November 12, 1981 samples for zinc, iron and manganese were determined to be outliers. The monitoring location for Segment 13 was on Coal Creek 30 meters upstream from its confluence with the Slate River and the water quality standards are specific to this location.



7. Page 3, Segment 14

An aquatic life classification has not been assigned to this segment because the presence of aquatic life is extremely limited, flow is intermittent, gradient is steep, and fish habitat is not present. The potential economic impact of standards to protect an aquatic life classification is therefore not justified.

8. Page 3, Segment 15

Water Supply and agriculture are existing uses. An aquatic life, class 1 classification may require occasional ammonia removal. The City of Gunnison supported aquatic life, class 1 classification.

9. Page 4, Segment 17

The Division's initial proposal for water quality standards for segment 17 was based on table values from 0-100 hardness/alkalinity column. The standards adopted are the same with the exception of zinc which represents the $\bar{x} + s$ of the Amax data for the period of record. The Amax data was in terms of total metals. However, all data used had total suspended solids of less than 30 milligrams per liter.

10. Page 4, Segments 21(a), 21(b) and 22

Indian Creek has been resegmented into 2 segments, 21(a) and 21(b), to reflect variabilities in water quality and aquatic life.

The uranium standard of 2.0 mg/l for Segment 21(a) is sufficient to protect the aquatic life in that segment. The standard is consistent with historic instream conditions and the existing discharge at SW33. The determination that this standard is sufficient to protect aquatic life is based upon bioassay and benthic studies which are included in the record (Homestake additional Exhibit A, Vol. II, pp. 232-235 and Homestake Exhibits H-N). This standard will adequately protect the classified uses assigned in Segment 21(b), and in Segment 22, Lower Marshall Creek.



The uranium standard of .3 mg/l for Segment 21(b) is sufficient to protect the aquatic life in that segment. The more stringent standard adopted here is consistent with historic instream conditions based upon data taken at both monitoring stations within the segment, namely SW3 and WQCD 149. The Division, in implementing and enforcing the standard for Segment 21(b), should recognize this fact that the standard reflects data from both stations. SW3 is located on Indian Creek approximately 660 feet below the confluence of Indian Creek and Bull Creek, and Station 149 is on Indian Creek approximately 75 feet above the confluence of Indian Creek and Marshall Creek. Station 149 is located in close proximity to Homestake sampling station SW4. The standard for segment 21(b) will adequately protect the classified uses assigned in segment 22, including the water supply use that exists there. It should be noted that there is no water supply use in either segment 21(a) or segment 21(b).

11. Page 6, Segments 29, 30, 31, and 33

A U.S. Forest Service letter dated December 9, 1981, provided water quality data for streams on segments 29, 30, 31, and 33 of the Upper Gunnison. It was considered unreliable because the reported concentrations were too high to support aquatic life on streams acknowledged by the U.S. Forest Service as good fisheries.

12. Page 7, Segment 5, North Fork of the Gunnison

Hubbard Creek was not separated from this segment as requested by the Blue Ribbon Coal Company as the presence of three species of trout justifies a class 1 aquatic life classification. The water supply use is also in place and the evidence indicated that uses in Hubbard Creek were compatible with the balance of the segment. In addition, although the Blue River Coal Company is a NPDES discharge permit holder there is currently no discharge and no current economic impact.



13. Page 9, Segment 5

An aquatic life classification of cold water, class 1 was requested for Wehauken Creek to protect an existing private trout hatchery on the creek. However, the majority of the tributary streams in this segment do not support fisheries because of steep gradients. The Commission elected to classify the segment as aquatic, cold water, class 2 with table values for cold water, class 1 to protect the fish hatchery on Wehauken Creek.

14. Page 9, Segment 6

The aquatic life classification was removed because the Commission found no evidence of aquatic life in this segment and determined that there was no expectation of such use in the future. The segment is badly degraded by mine drainage.

15. Page 12, Segment 2

The Commission assigned the segment a cold water, class 1, aquatic life classification having found: That the City of Delta would not be adversely impacted due to the dilution provided by large stream flows.

16. Page 14, Segment 5

An underlying standard for ammonia of .08 mg/l was adopted based upon the results of a bioassay conducted in 1975. Although this represents a relaxation of the proposed standard of .06 mg/l, this result is justified since the bioassay reflects site specific conditions for pH, temperature and TDS, which factors affect ammonia toxicity.

The temporary modification for ammonia reflects seasonal variations in ammonia levels based upon existing discharge permit conditions. Since the existing discharge will cease in 1986, the conditions causing exceedence of the underlying standard will be corrected within a 20 year period. These facilities will be replaced by new facilities designed for zero discharge of ammonia. In view of the cost of the new facilities and the limited duration of the existing discharge, a standard necessitating additional interim treatment facilities would not be economically reasonable.



35.12 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE; 1988
AMENDMENTS REGARDING SAN MIGUEL RIVER SEGMENTS

The provisions of 25-8-202(1)(a),(b) and (2); 25-8-203; 25-8-204; and 25-8-207 C.R.S., provide the specific statutory authority for adoption of the attached regulatory amendments. The Commission also adopted, in compliance with 24-4-103(4) and 24-4-103(8)(d) C.R.S., the following statements of basis and purpose and fiscal impact.

BASIS AND PURPOSE:

The hearing that resulted in these amendments was held as the result of a petition submitted by the Idarado Mining Company (Idarado). Idarado requested that the Commission, pursuant to 25-8-207 C.R.S., make a finding of inconsistency regarding certain use classifications and water quality standards in effect for the San Miguel River and related tributaries and that those classifications and standards be declared void ab initio. Idarado also requested that the Commission establish and adopt revised segment boundaries, use classifications and water quality standards for those waters. The Idarado proposal was opposed by the Division of Wildlife (DOW), the Town of Telluride, and San Miguel County (who were also parties to the proceeding), and by the Water Quality Control Division (WQCD).

Idarado owns the Idarado Mine located, in part, approximately one-half mile east of the Town of Telluride, County of San Miguel, Colorado. That portion of the mine is located in the San Miguel River drainage basin which is a part of the Lower Dolores River Basin. (3.5.0) 5 CCR 1002-8.

The headwaters of the San Miguel River, formed by the confluence of Bridal Veil and Ingram Creeks, are located approximately one mile east of the Idarado mine and Pandora Mill site. The San Miguel River then flows past Idarado's properties, through the Town of Telluride, and eventually to the Dolores River several miles downstream.

Idarado presently discharges water from the mine pursuant to a National Pollutant Discharge Elimination System permit (No. CO-0026956). Discharges from the mine are to the ground, not directly to surface waters.

The State of Colorado, in 1983, sued Idarado under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA"), 42 U.S.C. & 9601 et seq. In that action, the State alleges that Idarado's operations have resulted in injury to the environment. Idarado has vigorously contested those allegations and that action is presently pending in federal district court. Much of the information presented in this proceeding originally was generated in connection with the State CERCLA litigation.



Summary of Action:

Segment 3 of the San Miguel is resegmented into segment 3a above Marshall Creek and segment 3b below. Marshall Creek and Ingram Creek are divided into separate segments, segment 6a for Ingram Creek and segment 6b for Marshall Creek. The existing classifications are retained on all segments.

For new segment 3a, the existing numeric standards are retained except that the zinc standard is changed to 0.19 mg/l, a table value standard (for the 0 to 100 hardness range) is adopted for lead, and 6-year temporary modifications based on the existing ambient quality are adopted for cadmium, copper, lead and zinc.

For new segment 3b, the existing numeric standards are retained except that the zinc standard is changed to 0.19 mg/l, a table value standard (for the 100 to 200 hardness range) is adopted for lead, the table value standard for nickel is revised, based on the new hardness range, and 6-year temporary modifications based on the existing ambient quality are adopted for cadmium, copper, lead and zinc.

For new segments 6a and 6b, the existing numeric standards are retained except that the zinc standard is changed to 0.19 mg/l, table value standards (for the 0 to 100 hardness range) are adopted for cadmium, copper, and lead, and 6-year temporary modifications based on the existing ambient quality (except where it is already better than table values) are adopted for cadmium, copper, lead and zinc.

For the reasons elaborated below and in the Fiscal Impact Statement, the Commission has determined that these changes are economically reasonable. This is particularly the case since the costs that will be incurred by Idarado to achieve the revised standards are the result of a need to remedy prior impacts caused by Idarado.

Resegmentation:

The resegmentation of the San Miguel mainstem into segments 3a and 3b is warranted because water quality differs above and below Marshall Creek and significantly different aquatic life habitat is attainable above and below this point. Because of the influence of Marshall Creek, water quality in the San Miguel is significantly different below their confluence.

There was evidence that habitat limitations in the mainstem are significantly more pronounced above Bear Creek (downstream of Marshall Creek) due in part to rechannelization as the result of Idarado's operations and due to lower stream flows. The mainstem has been resegmented at Marshall Creek rather than Bear Creek because there was evidence that habitat limitations on the mainstem between those two creeks are largely correctable.

The resegmentation of Ingram and Marshall Creeks into segments 6a and 6b is warranted by the significantly different current water quality of those two streams.



Idarado proposed the establishment of additional sub-segments on the San Miguel mainstem and of separate segments for several additional tributaries which currently are grouped together as part of segment 2. The additional mainstem resegmentation appears unnecessary at this time. While there is evidence of some variations in water quality and habitat in this stretch, they do not appear substantial enough to warrant further resegmentation. Also, there is not enough information available regarding significant water quality or habitat differences to warrant separate segmentation for the other tributaries. Moreover, it is not apparent that further resegmentation would have significantly different regulatory impacts on potentially affected entities.

Classifications:

Retention of the existing classifications is warranted by the evidence submitted. Marshall Creek and Ingram Creek retain their current cold water aquatic life class 2 designation because of the evidence that they currently are, and are likely to remain, habitat-limited. No parties challenged this classification.

The other segments at issue retain their current cold water aquatic life class 1 designations. For the mainstem of the San Miguel, below Bear Creek all parties agreed that the class 1 designation is appropriate. From Bear Creek upstream to Marshall Creek, there was evidence of some degree of current habitat limitations, as well as water quality limitations on aquatic life. The Commission believes that any habitat limitations are correctable within a twenty year period.

For new segment 3a above Marshall Creek, there was some evidence that flows in this stretch are very limited, creating a significant habitat limitation. However, there was other evidence that there are substantial flows in this segment for significant parts of the year, adequate to support a wide variety of aquatic life.

For the other tributaries that were not resegmented or reclassified, there was some evidence that habitat limitations may be a significant factor on these streams, due primarily to flow and gradient conditions. However, the Commission does not believe this evidence was substantial enough to warrant reclassification. Moreover, it is not apparent that reclassification of these tributaries would have significantly different regulatory impacts on potentially affected entities.



Standards:

The revised metals standards for segments 3a, 3b, 6a and 6b have been adopted because the information currently available indicates that the more stringent levels should be attainable within a 20-year period. All parties agreed that significant improvement in water quality will occur as a result of the changes that will be implemented due to the legal actions that has been instituted under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). At a minimum,, the cleanup plan proposed by Idarado Mining Company will result in some water quality improvement. The standards are consistent with levels found to be achievable by the Record of Decision prepared by the State in the CERCLA action.

The Commission recognizes that the evidence demonstrates some uncertainty as to exactly what water quality levels will be achievable following any cleanup of the site. However, in view of (1) the evidence submitted, (2) the desirability of establishing specific standards that can serve as a goal for regulatory and planning purposes, and (3) the Water Quality Control Act's policy of encouraging water quality improvement where feasible, the revised standards are appropriate at this time. If additional information developed in the future demonstrates that any of these standards are in fact not attainable within a 20-year period, the standards can be revised accordingly.

For those revised standards based on table values, for segment 3b the values associated with the 100 to 200 hardness range have been used because the data indicates that hardness for this segment typically is in this range. Although the Commission typically has used alkalinity levels instead of hardness where that would result in more protective standards, hardness has been used here because of the greater quantity of hardness data available.

The Commission also has adopted temporary modifications for the metals for which standards have been revised, based on the current ambient quality, as calculated by the "mean plus one standard deviation" methodology. The adoption of these temporary modifications recognizes that cleanup of past mining-related impacts and resulting water quality improvement will take time. Thus, the temporary modifications recognize current conditions, while the revised standards establish goals that should be using for purposes of cleanup and other planning decisions. The temporary modifications have been adopted for six years because it appears from the evidence that completion of any site cleanup as a result of the CERCLA litigation will take at least that long. It is anticipated that the need for the temporary modifications would be reviewed in the 1992 triennial review of the Gunnison and Lower Dolores River Basin standards. At that time, the temporary modifications may be extended if new information then available demonstrates that the underlying standards cannot be attained by the expiration date of the current temporary modifications.



The Commission rejected the argument by Idarado that permanent standards should be set equal to the existing instream quality. The Commission believes that water quality does act as a limiting factor with respect to aquatic life in these segments. Moreover, as a matter of policy the Commission does not believe that only those aquatic life currently present in these segments warrant protection.

Summary:

The Commission has determined that the "finding of inconsistency" requested by Idarado pursuant to 25-8-207, C.R.S. is not appropriate. Use classifications and water quality standards for aquatic life for the segments in question are not more stringent than is necessary to protect fish life, shellfish life, and wildlife in water body segments which are reasonably capable of sustaining such life. Moreover, use classifications and water quality standards were not adopted based upon material assumptions that were in error or no longer apply. Based on new developments and new information since the original classification and standard-setting proceeding, the Commission has adopted revisions to stream segmentation and standards, as described above.

35.13 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE:
(1988 revisions regarding Canyon Creek, Sneffels Creek and Imogene Creek)

The provisions of 25-8-202 (1) (b) and (2); 25-8-204; and 25-8-207 C.R.S. provide the specific statutory authority for adoption of these regulatory amendments. The Commission also adopted, in compliance with 24-4-103(4), and 24-4-103(8)(d), C.R.S. the following statement of basis and purpose and fiscal impact.

Basis and Purpose:

No change in the aquatic use classifications was requested, although aquatic uses are extremely limited in the new segment 9a. A water supply classification was included for the existing segment 5 within which the headwaters were previously included, and the ambient quality should be sufficient to support that use. No water supply uses exist or are anticipated in upper Imogene and Sneffels Creeks and the existing quality is poorer than the dissolved manganese criterion for a water supply classification. Therefore, new segments 9a and 9b do not include a water supply use classification.

The changes in water quality standards are based upon a one-year sampling program conducted by Engineering Science, Inc., in consultation with the Division. The changes more accurately reflect existing stream quality, since the Commission's 1983 adoption of classifications and standards for these segments was based upon extremely limited data.



In determining appropriate standards based on the new data, the Commission applied the Division's established methodology for the rejection of certain data "outliers". The Commission felt that the inclusion of these outliers in the standards calculation would have resulted in standards that are not representative of water quality normally found in the segments in question. The adopted standards more accurately reflect existing ambient quality.

The temporary modification for mercury for segment 9b, adopted for one year, is based on the level necessary to protect aquatic life. The underlying standard for mercury is based on the level necessary to protect human health, assuming bioaccumulation of mercury in fish tissue. If a bioaccumulation study is completed on this segment by the Camp Bird Venture prior to the expiration of the temporary modification, the Commission will reconsider the appropriateness of the underlying standard.

The basis for the adoption of the temporary modification for lead in segment 9a is that imposition of the underlying standard at this time would likely result in substantial and widespread economic and social impact within the area in question, without corresponding environmental benefit. Evidence submitted indicates that construction of a treatment plant to meet the underlying standards could cost on the order of one to two million dollars. A cost of this magnitude would put continuation of the current exploration activities at the Camp Bird Mine - which currently employs 97 people - at risk.

The Commission also decided that no permanent downgrading of the segments in question is necessary at this time. Within the time frame of the temporary modification, the Camp Bird exploratory operations should be completed and the long-term economic impact of meeting the underlying standards should be known. If new information on economic impacts or ambient water quality becomes available prior to that time, those segments can be readdressed at the request of Camp Bird Venture. In any event, at the next triennial review, the underlying standards will be subject to potential reconsideration in view of pending revisions to the Basic Standards and Methodologies, although it is not anticipated that new facts will be available by that time to warrant reconsideration of the temporary modifications.

Fiscal Impact:

Other than the rulemaking hearing, no increased regulatory costs will result from the changes. No change in existing mine discharge flows is contemplated, and existing treatment of the historic mining flows will continue during the life of the temporary modification for lead. Adoption of the temporary modification will avoid the potential for an adverse substantial and widespread economic and social impact that could result from requiring immediate compliance with the underlying standards.

The revised standards, based on more accurate data, generally are less stringent than the previous standards for these waters. This should help assure that discharge treatment requirements are not unnecessarily stringent, resulting in potential long-term cost savings for existing or future dischargers.



35.14 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND PURPOSE; MAY, 1990 HEARING ON SEVERAL SEGMENTS:

The provisions of 25-8-202(1)(a), (b) and (2); 25-8-203; 25-8-204; and 25-8-402 C.R.S. provide the specific statutory authority for adoption of these regulatory amendments. The Commission also adopted, in compliance with 24-4-103(4), C.R.S., the following statement of basis and purpose.

Basis and Purpose:

First, the Commission has adopted new introductory language for the tables in section 3.5.6. The purpose of this language is to explain the new references to "table value standards" (TVS) that are contained in the Tables. These provisions also include the adoption of new hardness equations for acute and chronic zinc standards throughout the basin. Based on information developed since the "Basic Standards" were revised, these new equations have been determined to represent more appropriate zinc criteria. The other changes considered and adopted are addressed below by segment.

One other general issue should be addressed at the outset. Several parties to this proceeding submitted documents expressing concern regarding the adoption of High Quality 2 designations because of potential impact on water rights held by these entities. Although none of the initial documents submitted specifically asserted that the rulemaking proposal would cause material injury to these entities' water rights, particularly because the Senate Bill 181 consultation process is new, the Commission transmitted these documents to the State Engineer and the Colorado Water Conservation Board to solicit any comments that they might have. In its transmittal letter, the Commission stated its preliminary assessment that the proposed adoption of High Quality 2 designations did not present the potential to cause material injury to water rights.

The High Quality designation merely indicates that an antidegradation review will be required for certain activities. In its regulations, the Commission has specifically provided that in an antidegradation review "any alternatives that would be inconsistent with section 25-8-104 of the Water Quality Control Act shall not be considered available alternatives." If an issue should arise as to whether the antidegradation review criteria prohibiting material injury are being applied correctly to a specific proposed activity, that issue would be considered during that specific review process, including through consultation with the State Engineer and Water Conservation Board.

The Commission received letters back from both the State Engineer and the Water Conservation Board, stating their agreement with the Commission's preliminary assessment. Upon consideration of all of the available information, the Commission has determined that the adoption of High Quality 2 designations in this proceeding does not cause material injury to water rights.



A. Overview of Segment-Specific Changes

Three principal issues were in controversy for several of the segments addressed in this hearing. The most controversial was whether to apply a high quality 2 designation to certain waters. In several instances, designations proposed by the Water Quality Control Division were opposed on the basis that there was inadequate information to support such a designation. The three most common challenges to the adequacy of the information were: (1) detection limits for some data were too high to determine whether ambient quality was better than "table values;" (2) for some segments there was not adequate data for some or all of the twelve parameters referenced in section 3.1.8(2)(b)(i)(C); (3) for some segments the sample location(s) of available data were too limited to generalize the results to the whole segment.

The Commission explicitly considered establishing minimum data requirements when it adopted the current antidegradation regulation, and consciously rejected that option. Rather, the Commission recognized that it would be necessary to rely on best professional judgment to determine what constitutes representative data in a specific situation. These issues are not new, or unique to high quality designations. The Commission has for years been required to make water quality classification and standards decisions in the absence of perfect information. Requiring substantial, recently acquired data for all parameters from multiple locations in each segment before establishing high quality designations would assure that very few waters in Colorado would receive this protection for many years to come. As a policy matter, the Commission has determined that high quality designations may appropriately be established based on a lower threshold of available data than that suggested by several parties to this proceeding.

The Commission also notes that having adequate information upon which to base a high quality designation is not dependent solely on the availability of specific data for a particular segment. Relevant information may include data from downstream segments, comparison of available data with that for similar streams, and information regarding the presence or absence of activities likely to adversely impact the quality of the segment in question.

Where there is a substantial basis for considering a high quality 2 designation, in the face of some residual uncertainty the Commission has chosen to err in the direction of providing the protection. This policy decision is strongly influenced by the ease with which designations can be changed if better data is developed in the future. Unlike classifications, downgrading restrictions do not apply to water quality designations. If new site-specific data is developed that demonstrates that a particular high quality designation is improper, it can and should be removed by the Commission.



With respect to detection limits, the Commission has chosen to continue the same policy that it has followed for over ten years--i.e. to treat data reported as below detection limits as being equivalent to zero. While other methodologies have been proposed and may be defensible, the Commission has determined that this approach is reasonable and appropriate. Requiring routine analysis to below table value standard levels for all constituents would substantially increase monitoring costs for the state and the public. Moreover, the Commission believes that the "zero" assumption is fair, so long as it is applied consistently throughout the water quality regulatory system.

Use of zeros in the water quality designation or standard-setting process may marginally err in the direction of increased protection. However, when zeros are used in applying standards to specific dischargers, those dischargers benefit by the assumption that there is more assimilative capacity available in the stream (allowing higher levels of pollutants to be discharged) since the existing pollution is considered to be zero rather than some level between zero and the detection limit.

The second recurring issue addressed for multiple segments in this hearing was whether to establish a recreation class 1 classification wherever a high quality 2 designation is established. The Division proposed this classification change for applicable segments, since the high quality 2 designation indicates that such segments have adequate water quality to support the recreation class 1 use. However, the Commission generally has declined to change the recreation classification from class 2 to class 1 in such circumstances, unless there was also evidence submitted that class 1 uses were present or likely for the waters in question. Unless the use is present or likely, application of use-protection-based water quality standards does not appear appropriate. At the same time, the Commission notes that this approach does not diminish application of antidegradation protection requirements for high quality waters. Where the existing quality is adequate, a high quality 2 designation has been established, requiring antidegradation requirements to be met before any degradation is allowed, even though the recreation classification is class 2.

A related issue is the determination of which uses warrant the class 1 recreation classification. The recreation classification definition in section 3.1.13 (1)(a)(i) of the Basic Standards and Methodologies for Surface Water refers to "activities when the ingestion of small quantities of water is likely to occur," and states that "such waters include but are not limited to those used for swimming." In the past the Commission often has applied the class 1 classification only when swimming occurs, and not where other recreational uses that may result in ingestion of small quantities of water occur. The Commission now believes it is appropriate for the class 1 classification also to be applied for uses such as rafting, kayaking, and water skiing.



The appropriateness of recreation class 1 versus class 2 classifications was debated for several segments in the Gunnison Basin. The Commission has received information regarding actual recreational uses. It has also received substantial input regarding the propriety (or lack thereof) of broadening the application of the class 1 recreation classification, based upon an evolving interpretation of the Basic Standards language. After lengthy discussion, the Commission has decided that it is appropriate as a matter of policy to begin in this basin to apply the recreation class 1 classification for all uses that involve a significant likelihood of ingesting water, including but not necessarily limited to rafting, kayaking, and water skiing. In particular, the uses at issue for segments in this basin were kayaking and rafting. The Commission received substantial testimony that kayaking often results in water ingestion. In addition, the testimony presented, as well as the personal experience of individual Commissioners, indicates that rafting--white water or otherwise--also presents a significant potential for water ingestion.

Section 3.1.6(1)(d) of the Basic Standards and Methodologies for Surface Water requires the Commission to establish classifications to protect all actual uses. Therefore, for waterbodies where rafting and kayaking is an actual use, the recreation class 1 use classification should be applied, since ingestion of water is likely to occur. The Commission sees no reason to distinguish between ingestion that may result from swimming and ingestion that may result from rafting or kayaking. In fact, there was some testimony indicating that ingestion is more likely to result from the latter activities.

The Commission wishes to emphasize that the action that it is now taking is consistent with the existing definition of class 1 recreation uses. Some of the comments submitted stated or suggested that the action now being taken by the Commission would constitute a "definitional change" that should be addressed only in a review of the Basic Standards and Methodologies for Surface Water. No change in the regulatory definitions of the classifications is being considered or adopted at this time. Rather, the Commission is applying what it believes to be the proper interpretation of the existing definition.

The Commission believes that as a matter of policy it is not necessary or appropriate to wait until the July, 1991 rulemaking hearing regarding the Basic Standards and Methodologies for Surface Water to implement its current interpretation of the class 1 recreation classification. Over the last decade, there have been many instances when arguments and facts presented in basin-specific rulemaking hearings have resulted in an evolving interpretation of the provisions of the Basic Standards and Methodologies for Surface Water. This Commission is not bound by interpretations made by its predecessors in other basin-specific hearings. To the degree that the class 1 recreation classification in the past has not been applied for some existing activities that involve a likelihood of ingesting water, the Commission now believes that such decisions were in error.



This action does not improperly exclude input from entities interested in other river basins. First, the Commission specifically reopened this hearing and received input from entities not specifically concerned with the Gunnison basin. Moreover, the Commission can further modify its policy if in other basin-specific reviews, or in the upcoming review of the Basic Standards and Methodologies, parties that did not participate in this proceeding bring forth new considerations that the Commission believes warrant a modification in the approach to recreation classifications that is now being adopted. The Commission also does not believe that there was any problem with the notice provided for the specific segments at issue in this hearing. Each of the segments for which the recreation classification is being changed from class 2 to class 1 based on rafting or kayaking uses were proposed to be changed to class 1 in the original hearing notice. Although the basis for this proposal evolved during the hearing, any parties potentially concerned with a recreation class 1 classification were on notice that this change would be considered in this hearing.

In applying the interpretation of the existing recreation class 1 definition that has been described, the Commission is also influenced by the fact that the importance of recreational uses of surface waters in Colorado has increased over the last decade. Testimony indicated that uses such as rafting and kayaking have expanded substantially, and it is therefore even more important that adequate water quality protection now be provided.

Some of the testimony submitted addressed the appropriateness of the current fecal coliform standards that are applied in association with recreation classifications. The Commission believes that the appropriateness of the existing standards can and should be addressed, when and if there is new evidence available indicating that the current standards are not appropriate. However, changes in such standards were not at issue in this hearing. The Commission believes that questions regarding the appropriate numerical standards should not interfere with its obligation to establish appropriate classifications to protect existing uses. If members of the public have information indicating that a different indicator parameter should be used, or that different fecal coliform levels are appropriate for the respective recreation classifications, that issue can and should be considered in the upcoming review of the Basic Standards and Methodologies for Surface Water.

Comment was also submitted to the Commission expressing concern regarding the potential effect of downgrading restrictions, should the Commission now adopt class 1 recreation classifications for certain waters and later change its views regarding the appropriate approach to recreation classifications. The Commission does not believe that this presents a substantial problem. Downgrading is appropriate only when a use is not in place. So long as the class 1 recreation classification is defined as including activities that involve ingestion, applying that classification to waters where uses involving ingestion are present should not present a downgrading issue in the future. If the Commission at some later date should completely revise its approach to, and definition of, recreation classifications, application of the new system would involve a set of "de novo" determinations, and not questions regarding upgrading or downgrading.



The Commission recognizes the approach now being adopted may result in increased economic impacts for some dischargers, to meet the class 1 classifications. The evidence submitted indicated that in many instances this will not be the case, because state-wide effluent limitations for fecal coliforms and chlorine standards to protect aquatic life will often drive the level of disinfection and dechlorination that are required. Moreover, in some circumstances it may be possible for the Division to consider an expanded use of seasonal effluent limitations that take low flow or high flow circumstances into account. However, irrespective of these considerations, a potential increase in treatment requirements for some dischargers cannot eliminate the Commission's obligation to classify state waters to protect actual uses.

Finally, concern was expressed that the approach now taken by the Commission will result in inconsistency regarding recreation classifications for different waters throughout the state. Anytime a policy interpretation changes or evolves in any significant way, the first time the change is applied to specific state waters there will be some inconsistency among individual water bodies, since site-specific classifications and standards are addressed on a basin-by-basin basis. However, it is the Commission's intention to apply its policy interpretations consistently as individual basins are addressed.

The third recurring issue was the proposal by several parties that the Commission substantially resegment several existing stream segments, creating additional segments. The Commission generally has declined to resegment where there was not information submitted justifying different water quality designations, classifications or standards within separate portions of existing segments. Where there is not such a basis for increasing the number of segments, the Commission believes that resegmentation would unnecessarily add additional complexity to the current system.

B. Aquatic Life Class 1 with Table Values; New High Quality 2 Designations

Upper Gunnison River segments 4, 5, 6a, 6c, 7, 8, 10, 15, 19, 20, 25, 26, 27, 30

Lower Gunnison River segment 1b

San Miguel River segments 7b, 9, 10

Lower Dolores River segments 1, 6

Numerical standards for metals for these segments have in most instances been based on table values contained in Table III of the previous Basic Standards and Methodologies for Surface Water. Table III has been substantially revised, effective September 30, 1988. From the information available, it appears that the existing quality of these segments meets or exceeds the quality specified by the revised criteria in Table III, and new acute and chronic table value standards based thereon have therefore been adopted. There are also some of these segments whose previous standards were based in part on ambient quality, since their quality did not meet old table values based on alkalinity ranges. However, these segments generally have much higher hardness than alkalinity, and the new table values (based on hardness-dependent equations) are now appropriate as standards.



Existing use classifications for these segments have been retained, with the following exceptions. A water supply classification has been added to Upper Gunnison segment 19 because the existing quality is adequate to protect these uses. In addition, the recreation classifications for Upper Gunnison segment 15 and Lower Gunnison segment 1b have been changed from class 2 to class 1. The Commission recognizes that this change could result in increased treatment costs for dischargers to segment 15. However, the evidence demonstrated that class 1 recreation uses--i.e. rafting--are present in this segment. Because their classifications, designations, and standards will now be the same, Lower Gunnison segment 1b has now been combined with segment 1a (discussed in section C, below).

The descriptions of Upper Gunnison segments 20 and 23 have been revised, to consolidate several tributaries formally in segment 23 into segment 20. The same designation, classifications and standards are appropriate for all of the waters now in segment 20. Segment 23 is addressed under Paragraph F, below.

Finally, a high quality 2 designation has been established for each of these segments. The best available information in each case indicates that the existing quality for dissolved oxygen, pH, fecal coliform, cadmium, copper, iron, lead, manganese, mercury, selenium, silver and zinc is better than that specified in Tables I, II, and III of the Basic Standards and Methodologies for Surface Water, for the protection of aquatic life class 1 and recreation class 1 uses.

C. Existing High Quality 2 Segments: New Classifications and Standards

Upper Gunnison River segments 1, 2, 3

North Fork of the Gunnison segment 1

Uncompahgre River segment 1

Lower Gunnison segment 1a

San Miguel segment 1

These segments were already described as high quality class 2, and available information indicates that the parallel new high quality 2 designation continues to be appropriate for each. All except Lower Gunnison segment 1a are within wilderness areas. Lower Gunnison segment 1a is for the most part within the Black Canyon of the Gunnison National Monument and the entire segment is a renowned gold medal trout fishery. In addition, the following use classifications, and associated table value standards, were adopted for these segments:

Recreation - Class 1

Cold Water Aquatic Life - Class 1

Water Supply

Agriculture



These classifications and standards are appropriate based on the best available information regarding existing uses and quality. These provisions would apply in the event that degradation is determined to be necessary following an activity-specific antidegradation is determined to be necessary following an activity-specific antidegradation review.

The Commission rejected a proposal to resegment Lower Gunnison segment 1a into separate segments, because the evidence did not demonstrate that different designations, classifications, or standards are appropriate for different portions of this segment. The USGS data offered in support of resegmentation was unconvincing due to concerns regarding its reliability. Segment 1a has now been combined with segment 1b.

D. New Use-Protected Designations; No Change in Numeric Standards

Upper Gunnison River segments 6b, 14, 16, 28, 32

North Fork of the Gunnison segments 6, 10

Uncompahgre River segments 10, 12

Lower Gunnison River segment 4

San Miguel River segment 12

Lower Dolores River segment 4

These segments all qualify for a use-protected designation based on their present classifications. All are aquatic class 2 streams except Upper Gunnison segment 14 which has no aquatic life classification. Existing standards are adopted because these segments have only a minimal number of standards with no metal or nutrient standards.

E. New Use-Protected Designations; Revised Numeric Standards

Upper Gunnison River segment 11, 18

Uncompahgre River segments 4, 5, 13

Lower Gunnison River segments 6, 7, 8

Lower Dolores River segment 5

All of these segments, with the exception of Upper Gunnison segment 11, are aquatic life class 2 streams with numeric standards to protect the existing aquatic life. The aquatic life classification for Upper Gunnison segment 18 has been changed from cold water class 1 to class 2. Numerical standards for metals have in most instances been based on table values contained in Table III of the previous Basic Standards and Methodologies for Surface Water. Table III has been substantially revised, effective September 30, 1988. From the information available, it appears that the existing quality of these segments meets or exceeds the quality specified by the



revised criteria in Table III, and new acute and chronic table value standards based thereon are adopted, except as specified below. There are also some of these segments whose previous standards were based in part on ambient quality, since their quality did not meet old table values based on alkalinity ranges. However, these segments generally have much higher hardness than alkalinity, and the new table values (based on hardness-dependent equations) are now appropriate as standards. The one exception, Upper Gunnison segment 11, is a cold water class 1 stream that has three antidegradation parameters exceeding the table value criteria.

Table value standards are adopted for all parameters for all segments noted in Paragraph E except as follows:

<u>Segment</u>	<u>Constituents, ug/l</u>
Upper Gunnison 11	Cd(ch) = 2.2, Cu(ch) = 20, Pb(ch) = 16, Zn(ch) = 400, No acute standard for Cd, Cu or Zn.
Upper Gunnison 18	NH ₃ (ch) = 0.05 mg/l (NH ₃ (ch) = 0.02 mg/l from Co. Rd. 17 to confluence with Gunnison River.).
Uncompahgre 4	Fe(ch) = 2,800 (Trec), Se(ch) = 35 (Trec)

The purpose of the qualifier on Upper Gunnison segment 18 is to provide additional protection for trout that are likely to use this reach for spawning or inhabit it during seasons when flow is present.

F. No Change in Classification; No Designations; Revised Numeric Standards

Upper Gunnison segments 9, 12, 13, 17, 21a, 21b, 22, 23, 24, 29, 33

North Fork Gunnison segments 2, 3, 4, 5, 7, 8, 9, 11

Uncompahgre River segment 11, 14

Lower Gunnison segments 3, 5

San Miguel River segment 11

Lower Dolores River segment 2

These are water bodies whose classifications and standards are appropriate for high quality 2 designation, but for which either: (1) the quality is not suitable for a water supply classification or 85th percentile values of one or two parameters exceed the criteria for class 1 aquatic life; or (2) the Commission has determined that there is currently inadequate information available upon which to base a high quality 2 designation.



The segments that fall in the latter category are Upper Gunnison segments 22 and 33, North Fork segments 7 and 9, and Lower Gunnison segments 3 and 5. For example, for Upper Gunnison segment 33 there is some data showing table value exceedances for two parameters. Although the Division questioned the reliability of this data, no alternative data is available at this time. However, the Commission also notes that table value standards, rather than ambient quality standards, have been established for this segment since the available data do not create a reliable basis for specific ambient quality standards at this time. For North Fork segment 9, not only is there limited data available on this segment, but available information regarding other waters in this subbasin does not support the conclusion that these are high quality waters. The Commission also rejected proposals to change the aquatic life classification of North Fork segment 7 to class 2 with a use-protected designation, and to resegment Lower Gunnison segment 3, because these proposals were not supported by the evidence.

For North Fork segment 5, the Commission has rejected a proposal to change the recreation classification from class 1 to class 2. This hearing was not noticed pursuant to section 25-8-207, C.R.S., which provides authority to revise classifications based on material assumptions that were in error or no longer apply. If one of the parties, or any other member of the public, believes that the current classification is in error and that it may have an adverse impact on their activities, such a hearing may be requested in the future to consider this issue.

The Division proposed that the recreation classification for North Fork segment 3 be changed from class 2 to class 1. The Commission rejected this proposal due to inadequate information that such uses are in place or likely.

Table value standards are adopted for all parameters for all segments noted in Paragraph F except as follows:

<u>Segment</u>	<u>Constituent(s), ug/l</u>
Upper Gunnison 9	Zn (ch) = 80
Upper Gunnison 17	Fe (ch) = 1,600 (Trec)
Upper Gunnison 21a	U (ch) = 2,000
Upper Gunnison 21b	U (ch) = 300
Upper Gunnison 22	Fe (ch) = 1,180 (Trec)
North Fork Gunnison 4	Fe (ch) = 1,500 (Trec)
North Fork Gunnison 5	Fe (ch) = 1,900 (Trec)
Uncompahgre River 11	Fe (ch) = 1,600 (Trec)
Lower Dolores 2	Fe (ch) = 2,600 (Trec)



In addition, three-year temporary modifications have been adopted for the following segments and parameters:

<u>Segment</u>	<u>Constituent(s), ug/l</u>
Upper Gunnison 12	Cd (ch) = 10 (Trec) Zn (ch) = 790 (Trec)
Upper Gunnison 13	Cd (ch) = 10 (Trec) Zn (ch) = 1,080 (Trec)
Upper Gunnison 23	Ag (ch) = 0.5

G. Changes in Classification; No Designations; Revised Numeric Standards

Lower Gunnison River segment 2

San Miguel River Segments 4, 5

Lower Dolores River segment 3

Review of available data and existing uses indicates that Lower Gunnison segment 2 and Lower Dolores segment 3 are appropriate to be upgraded to recreation class 1 with a corresponding fecal coliform standard of 200 MPN/100 ml. The agricultural use classification has been added to San Miguel segments 4 and 5. Table value standards have been adopted for all parameters on all segments except for ambient standards for iron of 2,300 ug/l on Lower Gunnison segment 2 and 2,800 ug/l on Lower Dolores segment 3.

H. No change in Classifications or Standards

Upper Gunnison segment 31

Uncompahgre River segments 2, 3, 6, 7, 8, 9a, 9b

San Miguel River segments 2, 3a, 3b, 6a, 6b, 7a, 8

Upper Gunnison segment 31 and San Miguel River segments 7a and 8 are segments with several ambient standards based on total recoverable data. No new data was available to indicate that table value standards are appropriate and/or make the conversion to a dissolved metals basis for the ambient standards.

The remainder of the segments on the Uncompahgre and San Miguel are either directly involved in CERCLA litigations or may be influenced by them. In view of the current status of these CERCLA actions, the Commission has agreed to address these segments in the next triennial review. The Commission has requested the Division to notify it if any new discharges are proposed for these segments prior to that time, so that an earlier hearing can be held.



35.15

STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND
PURPOSE; NOVEMBER 2, 1992:

The provisions of 25-8-202, 204 and 402 C.R.S., provide the specific statutory authority for adoption of these regulatory amendments. The Commission also adopted, in compliance with 25-4-103(4) C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE:

The Commission adopted temporary modifications for Segments 12 and 13 as a result of its May 1990 hearing on the Gunnison and Lower Dolores River Basins. These temporary modifications are scheduled to expire July 1, 1993. A hearing for the Gunnison and Lower Dolores River Basins has been scheduled by the Commission for December 5, 1994. The Commission extended the expiration date of the temporary modifications to December 31, 1994, so that the Commission will have an opportunity to hear evidence as to whether these temporary modifications continue to be necessary.



STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND
PURPOSE, MARCH 1, 1993 HEARING:

The provisions of 25-8-202(1)(a), (b) and (2); 25-8-203; 25-8-204; and 25-8-402 C.R.S. provide the specific statutory authority for adoption of these regulatory amendments. The Commission also adopted in compliance with 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE:

The changes to the designation column eliminating the old High Quality 1 and 2 (HQ1, HQ2) designations, and replacing HQ1 with Outstanding Waters (OW) designation were made to reflect the new mandates of section 25-8-209 of the Colorado Water Quality Act which was amended by HB 92-1200. The Commission believes that the immediate adoption of these changes and the proposals contained in the hearing notice is preferable to the alternative of waiting to adopt them in the individual basin hearings over the next three years. Adoption now should remove any potential for misinterpretation of the classifications and standards in the interim.

In addition, the Commission made the following minor revisions to all basin segments to conform them to the most recent regulatory changes:

1. The glossary of abbreviations and symbols were out of date and have been replaced by an updated version in section 3.5.6(2).
2. The organic standards in the Basic Standards were amended in October, 1991, which was subsequent to the basin hearings. The existing table was based on pre-1991 organic standards and are out of date and no longer relevant. Deleting the existing table and referencing the Basic Standards will eliminate any confusion as to which standards are applicable.
3. The table value for ammonia and zinc in the Basic Standards was revised in October, 1991. The change to the latest table value will bring a consistency between the tables in the basin standards and Basic Standards.
4. The addition of acute un-ionized ammonia is meant to bring a consistency with all other standards that have both the acute and chronic values listed. The change in the chlorine standard is based on the adoption of new acute and chronic chlorine criteria in the Basic Standards in October, 1991.

Finally, the Commission confirms that in no case will any of the minor update changes described above change or override any segment-specific water quality standards.

35.17

STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE, SEPTEMBER 7, 1993:

The provisions of 25-8-202(1)(a), (b) and (2); 25-8-203; 25-8-204; and 25-8-402 C.R.S. provide the specific statutory authority for adoption of these regulatory amendments. The Commission also adopted in compliance with 24-4-103(4), C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE:

On November 30, 1991, revisions to "The Basic Standards and Methodologies for Surface Water", 3.1.0 (5 CCR 1002-8), became effective. As part of the revisions, the averaging period for the selenium criterion to be applied as a standard to a drinking water supply classification was changed from a 1-day to a 30-day duration. The site-specific standards for selenium on drinking water supply segments were to be changed at the time of rulemaking for the particular basin. Only one river basin, the South Platte, has gone through basin-wide rulemaking since these revisions to the "Basic Standards". Through an oversight, the selenium standards was not addressed in the rulemaking for this basin and has since become an issue in a wasteload allocation being developed for segments 15 and 16 of the South Platte. Agreement on the wasteloads for selenium is dependent upon a 30-day averaging period for selenium limits in the effected parties permits. Therefore, the parties requested that a rulemaking hearing be held for the South Platte Basin to address changing the designation of the 10 ug/l selenium standard on all water supply segments from a 1-day to a 30-day standard. The Water Quality Control Division, foreseeing the possibility of a selenium issue arising elsewhere in the state, made a counter proposal to have one hearing to change the designation for the selenium standard on all water supply segments statewide. The Commission and the parties concerned with South Platte segments 15 and 16 agreed that this would be the most judicious way to address the issue.

The change in the averaging period may cause a slight increase in selenium loads to those segments which have CPDS permits regulating selenium on the basis of a water supply standard. However, these segments are only five in number and the use will still be fully protected on the basis that the selenium criterion is based on 1975 national interim primary drinking water regulations which assumed selenium to be a potential carcinogen. It has since been categorized as a non-carcinogen and new national primary drinking water regulations were promulgated in 1991 that raised the standard to 50 ug/l.

The Commission also corrected a type error in the TVS for Silver by changing the sign on the exponent for the chronic standard for Trout from + 10.51 to - 10.51.



**STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY, AND
PURPOSE (February, 1995 Rulemaking)**

The provisions of 25-8-202(1)(b) and (2); 25-8-204; and 25-8-402 C.R.S. provide the specific statutory authority for adoption of these regulatory amendments. The Commission also adopted, in compliance with 24-4-103(4), C.R.S., the following Statement of Basis and Purpose.

BASIS AND PURPOSE:

The temporary modifications addressed in this hearing for segments 12 and 13 of the Upper Gunnison River, for cadmium and zinc, were previously adopted with an expiration date of December 31, 1994. For efficient utilization of resources, the Commission has extended the temporary modifications to December 31, 1996, so that these temporary modifications can be considered along with other issues in the overall Gunnison River Basin rulemaking hearing.

**STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND
PURPOSE (1995 Silver hearing)**

The provisions of C.R.S. 25-8-202(1)(b), (2) and 25-8-204; provide the specific statutory authority for adoption of these regulatory amendments. The Commission also adopted in compliance with 24-4-103(4) C.R.S. the following statement of basis and purpose.

BASIS AND PURPOSE

The changes described below are being adopted simultaneously for surface water in all Colorado river basins.

This action implements revisions to the Basic Standards and Methodologies for Surface Water adopted by the Commission in January, 1995. As part of a July, 1994 rulemaking hearing, the Commission considered the proposal of various parties to delete the chronic and chronic (trout) table values for silver in Table III of the Basic Standards. As a result of that hearing, the Commission found that the evidence demonstrated that ionic silver causes chronic toxicity to fish at levels below that established by the acute table values. It was undisputed that silver is present in Colorado streams and in the effluent of municipal and industrial dischargers in Colorado. The evidence also demonstrated that the removal of silver from wastewater can be costly. However, there was strongly conflicting scientific evidence regarding the degree to which silver does, or could in the absence of chronic standards, result in actual toxicity to aquatic life in Colorado surface waters. In particular, there was conflicting evidence regarding the degree to which the toxic effects of free silver are mitigated by reaction with soluble ligands to form less toxic compounds and by adsorption to particulates and sediments.

The Commission concluded that there is a need for additional analysis of the potential chronic toxicity of silver in streams in Colorado. The Commission encouraged the participants in that hearing, and any other interested parties, to work together to develop additional information that will help resolve the differences in scientific opinions that were presented in the hearing. The Commission believes that it should be possible to develop such information within the next three years.

In the meantime, the Commission decided as a matter of policy to take two actions. First, the chronic and chronic (trout) table values for silver have been repealed for the next three years.

The Commission is now implementing this action by also repealing for the next three years, in this separate rulemaking hearing, all current chronic table value standards for silver previously established on surface waters in Colorado. Any acute silver standards and any site-specific silver standards not based on the chronic table values will remain in effect. The Commission intends that any discharge permits issued or renewed during this period will not include effluent limitations based on chronic table value standards, since such standards will not currently be in effect. In addition, at the request of any discharger, any such effluent limitations currently in permits should be deleted.

The second action taken by the Commission was the readoption of the chronic and chronic (trout) table values for silver, with a delayed effective date of three years from the effective date of final action. The Commission also is implementing this action by readopting chronic silver standards with a corresponding delayed effective date at the same time that such standards are deleted from the individual basins. The Commission has determined that this is an appropriate policy choice to encourage efforts to reduce or eliminate the current scientific uncertainty regarding in-stream silver toxicity, and to assure that Colorado aquatic life are protected from chronic silver toxicity if additional scientific information is not developed. If the current scientific uncertainty persists after three years, the Commission believes that it should be resolved by assuring protection of aquatic life.

In summary, in balancing the policy considerations resulting from the facts presented in the July 1994 rulemaking hearing and in this hearing, the Commission has chosen to provide relief for dischargers from the potential cost of treatment to meet chronic silver standards during the next three years, while also providing that such standards will again become effective after three years if additional scientific information does not shed further light on the need, or lack of need, for such standards.

Finally, the Division notes that arsenic is listed as a TVS standard in all cases where the Water Supply classification is not present. This is misleading since Table III in the Basic Standards lists an acute aquatic life criterion of 360 ug/l and a chronic criterion of 150 ug/l for arsenic, but a more restrictive agriculture criterion of 100 ug/l. It would be clearer to the reader of the basin standards if, for each instance where the standard "As(ac/ch)=TVS" appears, the standard "As=100(Trec)" is being inserted as a replacement. This change should make it clear that the agriculture protection standard would prevail in those instances where the more restrictive water supply use protective standard (50 ug/l) was not appropriate because that classification was absent.

The chemical symbol for antimony (Sb) was inadvertently left out of the "Tables" section which precedes the list of segments in each set of basin standards. The correction of this oversight will aid the reader in understanding the content of the segment standards. Also preceding the list of segment standards in each basin is a table showing the Table Value Standards for aquatic life protection which are then referred to as "TVS" in the segment listings. For cadmium, two equations for an acute table value standard should be shown, one for all aquatic life, and one where trout are present. A third equation for chronic table value should also be listed. The order of these three equations should be revised to first list the acute equation, next the acute (trout) equation, followed by the chronic equation. This change will also aid the reader in understanding the intent of the Table Value Standards.

PARTIES TO THE PUBLIC RULEMAKING HEARING JUNE 12, 1995

1. Coors Brewing Company

2. The Silver Coalition
3. Cyprus Climax Metals Company
4. The City of Fort Collins
5. The City of Colorado Springs

35.20 **STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND
PURPOSE (December, 1995 Rulemaking)**

The provisions of C.R.S. 25-8-202(1)(b), (2); 25-8-204; and 25-8-402 C.R.S. provide the specific statutory authority for adoption of these regulatory amendments. The Commission also adopted in compliance with 24-4-103(4) C.R.S. the following Statement of Basis and Purpose.

BASIS AND PURPOSE

The temporary modifications addressed in this hearing for segments 12 and 13 of the Upper Gunnison river, for cadmium and zinc, were previously adopted with an expiration date of December 31, 1996. For efficient utilization of resources, the Commission has extended the temporary modifications to December 31, 1997, so that these temporary modifications can be considered along with other issues in the overall Gunnison River Basin rulemaking hearing, which is currently scheduled for June, 1997.

35.21 **STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE (June,
1997 hearing)**

The provisions of 25-8-202(1)(a), (b) and (2), 25-8-203; 25-8-204; and 25-8-402 C.R.S. provide the specific statutory authority for adoption of these regulatory amendments. The Commission also adopted, in compliance with 25-4-103(4) C.R.S. the following statement of basis and purpose.

BASIS AND PURPOSE

1. **Resegmentation**

Extensive renumbering of segments was made throughout the basin due to information which showed that:

- a. The original reasons for segmentation no longer applied.
- b. New water quality data showed that streams should be resegmented based on changes in their water quality.
- c. Certain segments could be grouped together in one segment because they had similar quality and uses.
- d. Certain segments were originally listed under the incorrect basin and have now been listed in the appropriate basin.

2. **Wetlands**

In March, 1993, the Commission amended the Basic Standards and Methodologies for Surface Water, Regulation 31 (5 CCR 1002-31) to include wetlands in the stream classification and standards system for the state. Due to that action, it became necessary to revise the segment description for all segments of the "all tributary" type to clarify that wetlands were also part of the tributary system for a given mainstem segment. All tributary wetlands now clearly carry the same

classifications and standards as the stream to which they are tributary as provided for in 31.13(1)(e)(iv).

Information was submitted in the hearing that the Water Quality Control Division has been working with the Colorado Geological Survey to develop methodologies to measure the functions of wetlands. The development of such methodologies is an important implementation issue with respect to water quality standards for wetlands and the supports the Division's efforts in this regard.

3. Manganese Standards

On all segments classified for water supply and aquatic life uses, the total recoverable manganese standard of 1,000 ug/l was stricken. The aquatic life manganese criterion was changed in 1991 revisions to the Basic Standards from total recoverable to dissolved and on these segments a more stringent dissolved manganese water supply standard of 50 ug/l is in place. On segments classified for aquatic life and not water supply, the 1000 ug/l standard is designated as dissolved.

4. Mercury Standard

The Basic Standards include the note that the standard for mercury is based on the Final Residual Value (FRV), and that mercury in the total form is the proper way to express that value. Therefore, the Commission decided to change the (TREC) notation for mercury to (tot) in all cases where it appeared.

5. Conversion to Dissolved Metals

Several segments in the previous version of the classifications and standards for these basins contained standards for metals as "total recoverable". The Commission previously determined that standards for most metals should be expressed as dissolved, necessitating conversion of those metals standards for the following segments:

Upper Gunnison Basin segments 11 and 12 (previously segments 12 and 13; temporary modifications for total recoverable metals deleted), 29 (previously segment 31).

Uncompahgre River segments 2, 3, 7, 8, and 9.

San Miguel River segments 2, 3a, 3b, 6a, 6b, 7a and 8.

6. Changes Necessary to Comply with "Swimmable" Requirements

The Commission has reached an understanding with EPA regarding the classification and standards necessary to comply with the goal established in the federal Clean Water Act that all waters of the nation be suitable for recreation in and on the water. In Colorado, that requirement translates into a Recreation, Class 1, with the 200 fecal coliform/100 ml standard wherever swimming, rafting, etc. are in place or have the potential to occur; Recreation, Class 2, with 200 fecal coliform/100 ml standard wherever secondary contact recreation only is practiced, and the existing quality supports a class 1 recreation use and with consideration of the lack of significant increased treatment costs; and Recreation, Class 2, with the 2000 fecal coliform/100 ml standard in most other situations. This policy has resulted in recreation classification and/or fecal coliform standard modifications to the following segments:

Upper Gunnison Basin segments 4, 5, 6a and 6b (previously 6b and 6c), 7, segments 8 through 12 (previously 9 through 13), segments 16 through 19 (previously 17 through 20), segments 21 through 24 (previously 22 through 25), segment 26 (previously 27), segments 28 through 30 (previously 29 through 31), and segment 32 (previously 33).

North Fork Gunnison segment 2.

Uncompahgre River segments 3, 5, 7, 8, 9 (previously 9a), 13, and 15.

Lower Gunnison River segments 6, 7, 8, and segments 10 and 11 (previously North Fork segments 8 and 9).

San Miguel River segments 3b, 4, 5, and 8.

Dolores River segments 4 and 5 (previously 5 and 6).

Concerns were raised in this hearing regarding the potential impact of more stringent fecal coliform standards on agricultural and ranching practices. Ranching and agriculture have been extensive in the Upper Gunnison River Basin. The Upper Basin Parties submitted testimony that these uses date back to the late 1800s and have been a continuing integral economic and social factor in the basin. The Commission recognizes the extent of this use of land within the basin, and that ranching and agriculture have co-existed with a high level of water quality in the basin. The Commission summarizes the extent of agricultural and ranching use within the basin as a helpful baseline should issues involving compliance with fecal coliform standards in the future involve agricultural and ranching activities.

The testimony submitted indicates that the large majority of water rights and uses within the basin are decreed for agricultural uses. There are approximately 1,500 absolute ditch rights within the basin decreed only for agricultural and irrigation uses, representing total decreed diversions of more than 7,700 c.f.s. As of 1997, the following acreage was classified within the basin as agricultural for taxing purposes:

<u>County</u>	<u>Acres</u>
Gunnison	343,742
Hinsdale	7,292
Saguache	54,299

The testimony also indicated that the Colorado Agricultural Statistics Service census of 1992 shows the total number of cattle and calves in Gunnison County as 30,713 head, and the Service estimates the total number as of January 1, 1997, was 31,343. The BLM reports there are 85 grazing permeates and 45,133 AUMs within its Gunnison Resource Area. The Forest Service reports that within its Taylor River Ranger District, there are 29 active allotments, encompassing 688,260 Forest Service acres, and a total number of 9,119 permitted livestock, and 8,893 of authorized livestock. Within the Cebolla Ranger District, the Forest Service reports there are 36 active allotments encompassing 552,529 acres, and a total number of 12,662 permitted livestock, and 13,395 authorized livestock.

The Commission finds that this degree of agricultural activities in the Gunnison Basin has existed in this region while the fecal coliform levels have been maintained at lower concentrations than the more stringent fecal coliform standards being adopted for a number of stream segments, as described above.

The Commission has previously stated that the fecal coliform standard is to be implemented with a rebuttable presumption that high densities of fecal coliform identified in water quality samples are due to human fecal pollution. The focus of the existing regulatory system for bacteriological parameters is on identifying and controlling sources of human waste that may be discharged to waters of the state without adequate treatment.

Parties to the hearing also proposed that the Commission adopt "an additional indicator that would distinguish between human fecal coliform and animal fecal coliform." Based on the information submitted, it does not appear that any such indicator is available at this time.

7. Upgrading of Class 2 Aquatic Life Segments

The Commission decided to adopt upgraded classifications and/or a more complete set of standards for several segments where the Division recommended such changes based on recent sampling of the biota by the Division of Wildlife (DOW) and the Water Quality Control Division. In general, these segments were previously thought to contain very little aquatic life, and were appropriate for the Class 2, minimal standards application found on most intermittent streams. However, the biological data referred to above indicated that a more diverse and rich aquatic life community existed, including threatened species. The Commission has chosen to recognize these facts by the adoption of a higher aquatic life classification and/or a complete set of protective standards. The segments/streams affected are:

Uncompahgre River segment 15.

Lower Gunnison River segment 9.

In addition, based on testimony by the Division of Wildlife, several specific creeks that had been included in segments with minimal standards were moved to segments with the usual aquatic life table value standards. These creeks are now located in:

Upper Gunnison segment 6b.

Uncompahgre segment 11.

San Miguel segment 10.

Lower Dolores segment 5.

8. Full Standards Not Applied to Aquatic Life Segments

EPA raised the issue of why the full set of inorganic aquatic life protection standards were not applied to various segments recommended for aquatic life class 2 classification. These segments typically were assigned only dissolved oxygen, pH, and fecal coliform standards. It was EPA's position that if there were dischargers located on the segments with the potential to produce toxic levels of one or more of the pollutants not contained in the abbreviated list of standards, the aquatic life in the segment could be jeopardized. Rather than adopt the full set of inorganic standards, the Commission was persuaded by the Division's arguments that the abbreviated list of standards was sufficient to protect the rudimentary aquatic life found in these intermittent streams, and that there was a very low probability that any of the few dischargers located on these segments would discharge toxic effluents. The segments where this policy was followed are:

Upper Gunnison Basin segments 6a, 13 (formerly 14), 15 (formerly 16), 27 and 31.

North Fork Gunnison segment 6.

Uncompahgre River segments 6, 10, and 12.

Lower Gunnison River segments 4, and 12.

San Miguel River segment 12.

Dolores River segment 3.

As noted above, where specific creeks within these segments were identified with aquatic life that warrants additional standards, they were moved into segments with the usual aquatic life table value standards.

9. Outstanding Waters Designations

The Commission followed the recommendations of the Division in assigning the Outstanding Waters (OW) designation to all waters covered by this regulation that are within the La Garita, West Elk, Collegiate Peaks, Maroon Bells, Ragged, Oh-Be-Joyful, Big Blue, Mt. Sneffels, and Lizard Head wilderness areas. Division water quality data indicated all antidegradation parameters to be well within table values and several of the wilderness waters provided habitat to ecologically significant species, i.e. Colorado River cutthroat trout and the boreal toad.

Uncompahgre River segment 1.

North Fork Gunnison segment 1.

San Miguel River segment 1. (Waters of the Sneffels Wilderness Area within the San Miguel watershed were added to Segment 1.)

The Commission also rejected a proposal by the High Country Citizens' Alliance (HCCA) and Western Slope Environmental Resource Council (WSERC) to adopt an outstanding waters designation for Upper Gunnison segment 25 and Lower Gunnison segment 1. These segments—which include Blue Mesa, Morrow Point and Crystal Reservoirs, as well as the Black Canyon of the Gunnison and the Gunnison Gorge—are located downstream of significant development in the Gunnison Basin and include reservoirs that are actively managed for a variety of purposes. The Commission does not believe that a showing has been made that adoption of the outstanding waters designation is necessary and appropriate for these waters at this time. The Commission is receptive to hearing future proposals regarding the adoption of outstanding waters designation or other forms of extra protection for these waters, supported by additional research and information regarding the implications of such protection for other activities in or upstream from such segments, particularly if broad support for any such proposals can be developed.

10. Use-Protected Designations

In a previous "Basic Standards" rulemaking, the Commission changed the basis for assigning the use-protected designation by eliminating the automatic assignment where recreation class 2 was a classified use. In this comprehensive review of the basin classifications, designations, and

standards, the Commission removed one use-protected designation in order to be consistent with that Basic Standards revision. This segment is:

Upper Gunnison Basin segment 10 (previously segment 11).

In addition, the Commission added the use-protected designation to several segments that met the criteria for use-protected. These are:

Uncompahgre River segments 6, 7, 8, 9, and 15.

Lower Gunnison River segment 9.

The Commission also rejected a proposal by HCCA and WSERC to remove the use-protected designations for several other stream segments. In each instance, the segments in question are classified as aquatic life class 2. The Basic Standards and Methodologies for Surface Water provide that this classification requires a use-protected designation, unless the Commission determines "that those waters with exceptional recreational or ecological significance should be undesignated, and deserving of the protection afforded by the antidegradation review provisions." Section 31.8(2)(b)(i). The evidence submitted in this hearing was not adequate to support such a finding.

11. Ambient Quality-Based Standards

The Division presented extensive information in its Exhibit 1 regarding ambient chemical quality of many segments in the basin. In most cases ambient quality was well within the "table value" limits prescribed by the Basic Standards for the protection of the various classified uses, prompting the Commission to assign those table values as segment standards. In a few cases, however, ambient quality exceeded the table values, yet there was information to suggest that the use was in place nonetheless. The available information lead to the conclusion that there was little hope of reversing the cause for degradation within twenty years. In those instances, the Commission followed the recommendation of the Division to adopt the 85th percentile of the ambient data as the standard (ambient quality-based standard). The following is a list of those segments where such standards have been adopted:

Upper Gunnison Basin segments 10, 11, 12 (formerly 11, 12, and 13) and 31.

North Fork Gunnison segment 4.

Uncompahgre River segments 2, 3, 4, and 7 .

EPA expressed concern in the hearing regarding the basis for adopting ambient quality-based water quality standards. The Commission encourages the Division to work with EPA to explore the potential for developing more standardized criteria for determining that such standards are appropriate on a site-specific basis.

12. Temporary Modifications

In several instances, the Commission decided to establish temporary modifications to table value standards as an alternative to establishing an ambient-based standard. This practice was followed where there was information to suggest the underlying standard could be met within three years to five years, or where there were questions surrounding the data which could be clarified with

additional sampling. Temporary modifications adopted for several segments for selenium standards are discussed separately below. The segments where other temporary modifications were established or modified are:

Upper Gunnison segment 8.

Uncompahgre segment 4.

Lower Gunnison River segment 9.

San Miguel River segments 3a and 3b. (See separate discussion below.)

13. Water + Fish Organics Applied to Aquatic Life Segments

It is the policy of the Commission to establish the water+fish organics standards found in the Basic Standards for those Class 2 aquatic life segments where fish of a catchable size and which are normally consumed are present and there is evidence that angling takes place on a recurring basis. Based on these criteria and the testimony submitted, the Commission has chosen to assign the water+fish organics standards to the following class 2 aquatic life segments:

Uncompahgre River segments 4, 9 and 13.

Lower Gunnison River segments 7 and 8.

14. Selenium Standards

In October of 1995, the Commission promulgated new aquatic life table value standards (TVS) for selenium, i.e., 20 ug/l acute and 5 ug/l chronic. At that time, the Commission adopted a footnote to the TVS which acknowledged that "selenium is a bioaccumulative metal and subject to a range of toxicity values depending upon numerous site-specific variables." The simultaneously adopted Statement of Basis and Purpose further elaborated upon this point, indicating that there exists the opportunity to develop "ambient or site-specific water quality standards on a basin-by-basin or specific segment basis," and identifying a number of site-specific factors that may be pertinent in the establishment of appropriate standards. Finally, the Commission noted that "a selenium standard need not be adopted during the course of triennial or segment specific rulemakings unless it is determined that the discharge or presence of selenium in the affected waters reasonably could be expected to interfere with the classified uses"

In this basin-specific rulemaking, the Commission has decided to adopt the selenium TVS for most segments in the Gunnison and Lower Dolores basins. Temporary modifications, however, based on the 85th percentile of ambient data with an underlying TVS of 5 ug/l chronic and 20 ug/l acute, have been adopted for the segments identified below.

Uncompahgre River Segment 4.

Uncompahgre River Segment 14 (Sweitzer Lake).

Lower Gunnison River Segment 2.

North Fork Gunnison River Segment 5.

The Commission may revisit the question of ambient standards at some point in the future.

The Commission is hopeful that adoption of temporary modifications for these four segments will assist in reducing the existing high selenium levels. This action will establish interim goal-based criteria for selenium on these segments, ensure that there will be no further increases in selenium concentration for these waters as a result of regulated sources, and provide a mechanism to spur progress in improving water quality and attaining the goal-based standard. Furthermore, the temporary modifications may assist the Division in writing NPDES permits for any point source discharges while restoration efforts for nonpoint sources of selenium are underway - the temporary modification will serve as the basis for calculating the interim effluent limits for such permits.

Most important, however, the temporary modifications provide a mechanism to address the existing high selenium concentrations in these segments. For example, adoption of temporary modifications will allow these segments to be listed pursuant to Clean Water Act (CWA) section 303(d) and section 305(b) - sections of the Act which require identification of water quality-limited segments. These listings, in turn, will increase the potential for funding for selenium control projects. Although it may become necessary to further revise the selenium numeric standards as additional information becomes available, it is hoped that this action will benefit efforts aimed at reducing the existing high selenium levels in these four segments.

In adopting the above standards and temporary modifications, the Commission took into consideration a number of factors, including statements from EPA and the USFWS that an ambient standard for the above-referenced segments may not be approved by EPA because of concerns over (i) the potential impacts of such an elevated concentration upon fish and wildlife, with specific reference to the federally listed endangered species in the Lower Gunnison River Segment 2; (ii) the need for EPA to meet its consultation responsibilities under Section 7 of the Endangered Species Act; and (iii) the uncertainty as to whether the present condition is reversible.

The Commission acknowledges that there is also uncertainty associated with what will eventually prove to be the appropriate selenium standard for segments in this basin. For example, EPA is currently reexamining its national criteria for selenium. The USFWS is completing additional work on the potential impact of selenium upon razorback suckers, with a final report due in early 1998. Additional work is also being performed upon perfecting site specific methods of standard determination, including a sediment-total organic carbon model and uptake of selenium in aquatic biota.

Additional uncertainties presently exist concerning (i) the relative contributions of varying sources to the existing high ambient levels; (ii) whether these levels can be significantly reduced within 20 years or, stated another way, the pace of restoration efforts; (iii) what BMPs or other treatment technology exists or may be developed in the near future to achieve such a reduction; and (iv) the extent of measurable improvements in the aquatic ecosystem if the underlying TVS of 5 ug/l chronic is achieved.

Furthermore, it is currently unknown whether adequate funds can be found to undertake prevention and remediation measures, with specific reference to the control of nonpoint sources of selenium loading. The interested parties, together with the EPA, USFWS, and the Division shall cooperate in identifying sources of funds and, to the extent possible, obtaining needed monies, including funds which may be available under Section 319 of the Clean Water Act, from the US Department of Agriculture pursuant to the Environmental Quality Improvement Program (EQIP), the US Bureau of Reclamation through the Colorado River Salinity Control Program or the US Department of Interior through the Irrigation Drainage Program. The EPA, USFWS, and the Division, in their

testimony, agreed to express to the Colorado River Basin Salinity Control Forum, in writing, their position that salinity control projects which simultaneously reduce loading should receive funding priority.

The interested parties to the hearing, the federal agencies, and landowners in the vicinity of the affected reaches have expressed an interest in employing voluntary, cooperative prevention and remediation practices for purposes of reducing selenium loading and improving water quality. The Commission encourages the formation of a Task Force for this purpose, and urges the Division to cooperate in such an effort. This Task Force could employ the TMDL concept in seeking to achieve the underlying TVS for selenium.

The Division has indicated to the Commission that it may take a minimum of five years to identify, fund and implement selenium control projects in these basins which may measurably improve water quality in the segments of concern. Thus, though the segments with a temporary modification will be reviewed at the end of three years, it is not anticipated that there will be any significant changes at that time.

15. Site-Specific Issues

a. Coal Creek

In response to a proposal by Climax Molybdenum Company (CMC), the Commission has adopted ambient quality-based standards for several metals for Coal Creek, segments 11 and 12 of the Upper Gunnison Basin (formerly segments 12 and 13). CMC submitted evidence that elevated metals levels in these segments are caused by "natural or irreversible man-induced" impacts. In adopting these standards, the Commission recognizes the following agreements between the parties with respect to these segments:

- CMC agrees to assist HCCA in performing a reconnaissance study consisting of physical surveillance and high flow and low flow water quality monitoring in segment 11 with the objective of identifying sources of Cd, Fe, Mn and Zn.
- CMC agrees to work with other parties, which may include the Town of Crested Butte and Gunnison County, to pursue development of a remedial project (or projects) to be funded by the section 319 nonpoint source grant program if such project (or projects) appear feasible.
- HCCA agrees to support the adoption of the ambient based standards proposed by CMC for segments 11 and 12.

b. Indian Creek

Homestake Mining Company expressed concern about the Division's initial proposal to eliminate separate segments for Indian Creek (formerly Upper Gunnison segments 21a and 21b) and to add these waters into the segment for Marshall Creek (formerly Upper Gunnison segment 22). Following consideration of the evidence, including an agreement between the Division and Homestake, the Commission has left the upper portion of Indian Creek (formerly segment 21a, now segment 20) as a separate segment. The lower portion of Indian Creek (formerly segment 21b) has been added to the Marshall Creek segment (formerly segment 22, now segment 21).

c. North Fork segments 2 and 3

The Commission considered a proposal by HCCA and WSERC to move the segment boundary between North Fork segments 2 and 3 further downstream, to account for primary contact recreation activities in the upper portion of segment 3 as previously defined. The evidence does demonstrate that primary contact recreation uses currently occur in these waters. Following an extensive discussion of alternative potential resegmentation options, the Commission has established the new segment boundary at the Black Bridge, on which 4175 Drive crosses the river. The evidence indicates that the majority of the primary contact recreation use occurs above that point.

d. Fruitgrowers Reservoir

In response to a proposal by the Division, the Commission has established a new segment for Fruitgrowers Reservoir—segment 9 in the Lower Gunnison Basin. The evidence demonstrates that aquatic life class 2, recreation class 1 and agriculture are appropriate classifications for this reservoir based on actual current or recent past uses of these waters. In view of the reservoir's current degraded quality, the Commission has adopted a goal qualifier for the recreation classification and temporary modifications for the un-ionized ammonia and fecal coliform standards. The Commission appreciates and wishes to encourage the efforts of interested entities in the area to undertake a cooperative, inter-governmental two-year study to better determine the cause of current water quality problems in the reservoir. The Commission requests that the Division provide to the Commission an update regarding the status of these study efforts in the fall of 1998.

e. San Miguel segments 3a and 3b

The extensive data submitted in evidence demonstrate that the zinc levels in San Miguel River segments 3a and 3b exceed the current numeric standard of 190 ug/l of dissolved zinc (chronic) applicable to both segments. It is unclear whether that standard can be met within 20 years. Under a 1992 Consent Decree with the State of Colorado, Idarado Mining Company is pursuing activities pursuant to a Remedial Action Plan ("RAP") to remediate historic mining impacts in the upper reaches of the San Miguel River and Red Mountain Creek drainages, in order to enhance water quality. One performance objective of the RAP is to reduce zinc levels at a compliance point within San Miguel River segment 3b to 276 ug/l of dissolved or 336 ug/l of total zinc, on an average annual basis. The Commission will review the appropriateness of the 190 ug/l dissolved zinc (chronic) standard for segments 3a and 3b in future rulemakings to assess whether it should be adjusted to reflect actual water quality achievable and the uses that are attainable in light of Idarado's remediation efforts. In addition, five-year temporary modifications of 410 ug/l and 640 ug/l for dissolved zinc in segments 3a and 3b, respectively, to reflect ambient water quality are justified in light of the anticipated water quality enhancement resulting from Idarado's actions, and to coincide with the start of the compliance period under the RAP. Nothing in this rulemaking is intended to adjust, modify, or abrogate the Consent Decree or RAP.

f. New Water Supply Segments

In response to a request by HCCA and WSERC, the Commission has added a water supply classification, and corresponding numerical standards, to the following three segments:

Upper Gunnison segments 8 (formerly 9) and 15 (formerly 16).

North Fork segment 6.

In each case, evidence was submitted that alluvial ground water hydrologically connected to these surface waters is used through domestic wells as a water supply. For Upper Gunnison segment 8, the Commission also adopted temporary modifications for iron and manganese, in view of evidence that current levels of these constituents are elevated above table values.

16. Other Proposals

EPA expressed concern in the hearing regarding whether documentation had been provided of an adequate "use attainability analysis" for segments whose classifications do not achieve the "fishable, swimmable" goals of the federal Clean Water Act. Based on the information provided, the Commission has adopted the Division's proposals for the waters in question. The Commission encourages the Division to work with EPA to assure that adequate documentation of the Division's use attainability analysis conclusions has been provided.

HCCA and WSERC requested that the Commission take action in this hearing to prohibit future in-stream gravel mining. The Commission has determined that this proposal is not relevant to the water quality designation, classification and standards issues raised in this hearing.

35.22 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: JULY, 1997 RULEMAKING

The provisions of sections 25-8-202 and 25-8-401, C.R.S., provide the specific statutory authority for adoption of the attached regulatory amendments. The Commission also adopted, in compliance with section 24-4-103(4) C.R.S., the following statement of basis and purpose.

BASIS AND PURPOSE

The Commission has adopted a revised numbering system for this regulation, as a part of an overall renumbering of all Water Quality Control Commission rules and regulations. The goals of the renumbering are: (1) to achieve a more logical organization and numbering of the regulations, with a system that provides flexibility for future modifications, and (2) to make the Commission's internal numbering system and that of the Colorado Code of Regulations (CCR) consistent. The CCR references for the regulations will also be revised as a result of this hearing.

35.23 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE: APRIL, 1998 RULEMAKING

The provisions of sections 25-8-202(1)(b) and (2); 25-8-204; and 25-8-402 C.R.S. provide the specific statutory authority for the adoption of these regulatory amendments. The Commission also adopted in compliance with section 24-4-103(4) C.R.S. the following Statement of Basis and Purpose.

BASIS AND PURPOSE

As the result of a June, 1997 rulemaking hearing considering numerous proposed revisions to Gunnison River Basin water quality standards, the Commission decided to apply recently revised aquatic life table value criteria for selenium (20 ug/l acute and 5 ug/l chronic) to many segments in the basin. The basis for this action is discussed in paragraph 14 of the Statement of Basis and Purpose for that rulemaking (section 35.21). However, it was later noticed that in that rulemaking the Commission inadvertently neglected to revise the listing of selenium table values contained in

section 35.6(3) of the regulation. In this rulemaking, the Commission is correcting the listing of selenium table values in section 35.6(3). The Commission is also deleting reference to March 2, 1998 effective date for silver table values, since that date has now passed. -

35.24 STATEMENT OF BASIS, SPECIFIC STATUTORY AUTHORITY AND PURPOSE:
DECEMBER, 1998 RULEMAKING

The provisions of sections 25-8-202(1)(b) and (2); 25-8-204; and 25-8-402 C.R.S. provide the specific statutory authority for the adoption of these regulatory amendments. The Commission also adopted in compliance with section 24-4-103(4) C.R.S. the following Statement of Basis and Purpose.

BASIS AND PURPOSE

The Commission has recently approved a new schedule for triennial reviews of water quality classifications and standards for all river basins in Colorado. In this hearing the Commission has extended the expiration dates of temporary modifications [and, for the Animas Basin, the effective dates of underlying standards] without substantive review, so that the next substantive review of the temporary modifications can occur as part of the overall triennial review of water quality standards for the particular watershed. This will avoid the need for multiple individual hearings that would take staff resources away from implementation of the new triennial review schedule.